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1920-21

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STANFORD UNIVERSITY, CALIFORNIA
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OFFICE DIRECTORY

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the larger buildings and ten numbers to each one-story building, beginning with the Assembly Hall (number 120). The Administration Building is on the north facade of the Outer Quadrangle. The Engineering buildings south of the Quadrangles begin with number 500. The Library is the central building in the second quadrangle group. The Chemistry building is on the west avenue between the Quadrangles and the Museum. Anatomy and Bacteriology are in the old Museum building.]

The administration officers are:

PRESIDENT, room 165.
COMPTROLLER, room 163.
REGISTRAR, room 164.
DEAN OF MEN, room 161.
DEAN OF WOMEN, room 162.
LOWER DIVISION COMMITTEE, room 161.
ACADEMIC SECRETARY AND ALUMNI SECRETARY, room 174.
LIBRARIAN, University Library.
APPOINTMENT SECRETARY, room 170.
MEDICAL ADVISER OF MEN, Encina Gymnasium.
MEDICAL ADVISER OF WOMEN, Roble Gymnasium.
COMMITTEE ON PUBLIC HEALTH, room 164.

The various Departmental offices are given in the SCHEDULE and in the DIRECTORY OF OFFICERS AND STUDENTS.

The University Post Office is *Stanford University, California.*

The University Telephone Office is *Palo Alto* (Office and Departmental telephones "Palo Alto 900" with local numbers added).

The University Railway Station and Telegraph and Express Offices are *Palo Alto, California.*

Requests for *University Bulletins*, blanks, and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to THE REGISTRAR, *Stanford University, California.*

UNIVERSITY CALENDAR

1920

AUTUMN QUARTER

Oct.	1	Friday	Registration for Autumn Quarter.
Oct.	2	Saturday	Instruction begins.
Oct.	8	Friday	Conferring of Degrees.
Nov.	25	Thursday	Thanksgiving Recess.
Nov.	28	Sunday	
Dec.	20–22	Wednesday–Friday	End-Quarter Examinations.

1921

WINTER QUARTER

Jan.	3	Monday	Registration for Winter Quarter.
Jan.	4	Tuesday	Instruction begins.
Jan.	7	Friday	Conferring of Degrees.
Feb.	22	Tuesday	Washington's Birthday.
March	9	Wednesday	Founders' Day.
Mar.	16–18	Wednesday–Friday	End-Quarter Examinations.

SPRING QUARTER

March	28	Monday	Registration for Spring Quarter.
March	29	Tuesday	Instruction begins.
April	1	Friday	Conferring of Degrees.
June	13–15	Monday–Wednesday	End-Quarter Examinations.
June	20	Monday	Commencement.

SUMMER QUARTER

June	21	Tuesday	Registration for Summer Quarter.
July	27	Wednesday	First Half ends.
July	28	Thursday	Second Half begins.
Sept.	1–3	Thursday–Saturday	End-Quarter Examinations.

AUTUMN QUARTER

Sept.	30	Friday	Preliminary Registration (Lower Division).
Oct.	1	Saturday	Registration for Autumn Quarter.

ADMINISTRATIVE OFFICERS

THE BOARD OF TRUSTEES

[The figures in parentheses indicate year of beginning of service.]

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LELAND WHITMAN CUTLER, A. B. (1920), 333 Pine st., San Francisco
FRANK PRENTISS DEERING, A. M. (1916),
Nevada Bank Bldg., San Francisco
CHARLES PARMELEE EELLS, A. B. (1905), 2415 Pierce st., San Francisco
JOSEPH DONOHOE GRANT, A. B. (1891), 2200 Broadway San Francisco
THOMAS TINGEY CRAVEN GREGORY, A. B. (1919), San Francisco
HERBERT CLARK HOOVER, LL. D. (1912), Stanford University
TIMOTHY HOPKINS (1885), (Nevada Bank Bldg., S. F.) Menlo Park
SAMUEL FRANKLIN LEIB, LL. B. (1891), First Ntl. Bank Bldg., San Jose
WILLIAM MAYO NEWHALL, B. S. (1912), 260 Calif. st., San Francisco
JAMES LEROY NICKEL (1909), Merchants Exchange Bldg., San Francisco
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MARCUS CAUFFMAN SLOSS, A. M. (1920), Mills Bldg., San Francisco

OFFICERS OF THE BOARD

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Finance: GREGORY, ANDERSON, BOURN, CHAMBERLAIN, GRANT, HOPKINS, NICKEL.
University: NOURSE, DEERING, EELLS, HOOVER, LEIB, CUTLER.
Library: HOPKINS, EELLS, CHAMBERLAIN.
Rules: EELLS, GRANT, DEERING.
Campus: CUTLER, GREGORY, HOPKINS, HOOVER.
Medical Sub-Committee: NOURSE, CHAMBERLAIN, GREGORY.

THE UNIVERSITY

[Office in parentheses.]

President: Ray Lyman Wilbur. (Adm. 165.)
Comptroller: Almon Edward Roth. (Adm. 163.)
Registrar: Orrin Leslie Elliott. (Adm. 164.)
Librarian: George Thomas Clark. (Library.)
Academic Secretary: John Ezra McDowell. (Adm. 174.)
Dean of Men: George Bliss Culver. (Adm. 161.)
Dean of Women: Harriet Bradford. (Adm. 162.)
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Appointment Secretary: Elizabeth Burritt Snell. (Adm. 170.)
Medical Adviser of Men: Alfred David Browne. (Encina Gymnasium.)
Medical Adviser of Women: Clelia Duel Mosher. (Roble Gymnasium.)

DEPARTMENT EXECUTIVES

[Office in parentheses.]

Anatomy: Arthur William Meyer. (m7.)
Applied Mathematics: Leander Miller Hoskins. (275.)
Bacteriology and Experimental Pathology: Edwin William Schultz.† (m4.)
Botany: Douglas Houghton Campbell. (468.)
Chemistry: Robert Eckles Swain. (c44.)
Civil Engineering: Charles David Marx. (271.)
Economics: Murray Shipley Wildman. (223.)
Education: Ellwood Patterson Cubberley. (32.)
Electrical Engineering: Harris Joseph Ryan. (505.)
English: William Herbert Carruth. (209.)
Geology: James Perrin Smith. (329.)
Germanic Languages: William Alpha Cooper. (116.)
Greek: Augustus Taber Murray. (250.)
History: Ephraim Douglass Adams. (237.)
Latin: Henry Rushton Fairclough. (257.)
Law: Charles Andrews Huston. (5.)
Mathematics: Robert Edgar Allardice. (70.)
Mechanical Engineering: William Frederick Durand. (260.)
Medicine: William Ophüls. (San Francisco.)
Anatomy: Arthur William Meyer. (m7.)
Bacteriology and Experimental Pathology: Edwin William Schultz.† (m4.)

† Acting.

Chemistry: Robert Eckles Swain. (c44.)
Hygiene and Public Health: William Ophüls. (San Francisco.)
Medicine: Albion Walter Hewlett. (San Francisco.)
Obstetrics and Gynecology: Alfred Baker Spalding. (San Francisco.)
Pathology: William Ophüls. (San Francisco.)
Pharmacology: Albert Cornelius Crawford.* (San Francisco.)
Physiology: Ernest Gale Martin. (482.)
Surgery: Stanley Stillman. (San Francisco.)
Military Training: Leroy P. Collins. (Gymnasium.)
Mining and Metallurgy: Theodore Jesse Hoover. (558.)
Philosophy: Henry Waldgrave Stuart. (93.)
Physics: David Locke Webster. (389.)
Physiology: Ernest Gale Martin. (482.)
Political Science: Edwin Angell Cottrell.† (22.)
Psychology: Frank Angell. (399.)
Romanic Languages: Oliver Martin Johnston. (246.)
Zoology: Charles Henry Gilbert. (443.)

Physical Education—
Men: Alfred David Browne.
Women: Helen Masters Bunting.
Library: George Thomas Clark.
Memorial Church: David Charles Gardner.
Museum: Pedro J. Lemos.

* Deceased March 14, 1921.
† Acting.

STANDING COMMITTEES OF THE ACADEMIC COUNCIL

[The first-named member in each committee is Chairman, unless otherwise indicated. The term of office of members of the Executive Committee begins immediately upon election (in May); of all other standing committees, September 1st.]

ADVISORY BOARD

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3. Registration: ELLIOTT, CROSS, MITCHELL, SEWARD, SNYDER.
4. Graduation: J. P. SMITH, ELLIOTT, E. G. MARTIN, VERNIER, WEBSTER.
5. Schedule and Examinations: MITCHELL, ELLIOTT, JONES, MORENO, STEBBINS.
6. Graduate Study: FRANKLIN, ALDEN, BRIGGS, DURAND, HOSKINS, MEYER, PEIRCE, J. P. SMITH, STUART, TATLOCK, WILDMAN.
7. Library: SWAIN, ADAMS, COOPER, G. H. MARX, WILDMAN.
8. University Publications: TOWNLEY, ADAMS, BRIGGS, HOOVER, MCFARLAND.

OFFICERS OF INSTRUCTION AND ADMINISTRATION

[Name; office; residence telephone; title; residence; post-office. Post-office in all cases *Stanford University* except where University residence is followed by initial letters of town ("p" indicates *Palo Alto* post-office; "Mayfield-m," *Mayfield* post-office, etc.). Street address *Palo Alto* or *Campus* unless otherwise named. The figures in parentheses following name indicate the quarters in active service during the year (e. g., 124, autumn, winter, and summer quarters); brackets indicate absence on leave for the year. The dagger (†) marks the names of men who are married.]

Emeritus List

†Anderson, Melville Best, Menlo Park 773
Professor of English Literature, Emeritus, Menlo Park

A. M., Butler University, 1877; LL. D., Aberdeen, 1906. At Stanford since 1891, Emeritus since 1910.

†Barkan, Adolph,
Professor of Structure and Diseases of Eye, Ear, and Larynx, Emeritus, Zurich, Switzerland

M. D., University of Vienna, 1866; LL. D., University of Glasgow, 1901. At Stanford since 1909, Emeritus since 1911.

†Branner, John Casper, PA 1010
President, Emeritus, 13 Alvarado

B. S., Cornell, 1882; Ph. D., Indiana, 1885; LL. D., Arkansas, 1897, Maryville College, 1909, California, 1915; D. Sc., Chicago, 1916. Professor of Geology, 1891–1915, Vice-President, 1898–1913, President, 1913–1915, Emeritus since 1916.

†Griffin, James Owen, PA 1054
Professor of German, Emeritus, 14 Alvarado

Graduate Pennsylvania State Normal School, 1873. At Stanford since 1891, Emeritus since 1917.

†Jenkins, Oliver Peebles, PA 1042M
Professor of Physiology and Histology, Emeritus, 3 Lasuen

A. B., Moore's Hill College, 1869, A. M., 1872; M. S., Indiana, 1886, Ph. D., 1889; LL. D., Moore's Hill College, 1916. At Stanford since 1891, Emeritus since 1916.

†Jordan, David Starr, PA 1001
Chancellor, Emeritus, Xazmin House

M. S., Cornell, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler College, 1878; LL. D., Cornell, 1886, Johns Hopkins, 1902, Illinois College, 1903, Indiana, 1909, California, 1915, Western Reserve, 1915. President of the University, 1891–1913, Chancellor, 1913–16, Emeritus since 1916.

Martin, Lillien Jane, Sutter 3489
Professor of Psychology, Emeritus. 821–822 Shreve Bldg., SF

A. B., Vassar, 1880; M. L. A., and hon. Ph. D., Bonn, 1913. At Stanford since 1899, Emeritus since 1916.

†SANFORD, FERNANDO, PA 646
Professor of Physics, Emeritus, 450 Kingsley

B. S., Carthage College, 1879, M. S., 1882. At Stanford since 1891, Emeritus since 1919.

†STILLMAN, JOHN MAXSON, PA 1048
Professor of Chemistry, Emeritus, 2 Alvarado

Ph. B., California, 1874, Ph. D., 1885, LL. D., 1916. At Stanford since 1891, Emeritus since 1917.

ACTIVE LIST

†ABRAMS, LEROY, (1234) PA 1125
Associate Professor of Botany, 23 Salvatierra

A. B., Stanford, 1899, A. M., 1902; Ph. D., Columbia, 1910. Acting Professor of Botany, University of Idaho, 1899–1900; Assistant in Botany, Stanford University, 1900–02, Instructor, 1902–04; Fellow in Botany, Columbia University, 1904–05; Assistant Curator, Division of Plants, United States National Museum, 1905–06; Lecturer in Botany, University of California, first semester, 1915–16; Field Assistant, U. S. Department of Agriculture, summer, 1918. At Stanford 1900–04, and since 1906.

†ADAMS, EPHRAIM DOUGLASS, (123) PA 1058
Professor of History, 7 Cabrillo

A. B., Michigan, 1887, Ph. D., 1890; LL. D., Grinnell, 1917; Litt. D., Tufts, 1918. Principal of High School, McGregor (Ia.), 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington (D. C.), 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891–1902. At Stanford since 1902.

†ADDIS, THOMAS, (1234) Sausalito 333
Associate Professor of Medicine, 57 Miller ave., Sausalito-s

M. B. Ch. B., Edinburgh, 1905; M. D., and M. R. C. P., 1908. Clinical Assistant, Medical Out-Patient Department, Royal Infirmary of Edinburgh, 1908. 1911; Medical Registrar, Leith Hospital, 1911; Carnegie Research Scholar and Fellow, 1908–11; Director of the Clinical Laboratory, Lane Hospital, since 1911. At Stanford since 1911.

†ALDEN, RAYMOND MACDONALD, (123) PA 288
Professor of English, 427 Embarcadero Road

A. B., Pennsylvania, 1894; A. M., Harvard, 1896; Ph. D., Pennsylvania, 1898. Instructor in English, Columbia University, 1894–95; Assistant in English, Harvard University, 1896–97; Senior Fellow in English, University of Pennsylvania, 1898–99, Instructor, 1899–1901; Assistant Professor of English Literature and Rhetoric, Stanford University, 1901–09, Associate Professor of English, 1909–11; Professor of English, University of Illinois, 1911–14; Acting Associate Professor, University of Chicago, Summer Quarter, 1910; Acting Professor, Harvard University, Summer Session, 1912, Columbia University, 1916, 1919. At Stanford 1901–11, and since 1914.

†ALDERSON, HARRY EVERETT, (1234) Fillmore 4548
Associate Clinical Professor of Medicine, 2649 Green, SF-sf

M. D., California, 1900. Assistant in Skin Diseases, Medical Department of University of California, 1906–12; Professor of Art Anatomy, California School of Design, 1906–12; Chief of Skin Clinic, San Francisco Fruit and Flower Mission. At Stanford since 1912.

ALLARDICE, ROBERT EDGAR, (123) PA 1036
Professor of Mathematics, County Road

A. M., Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882–83, Drummond Scholar in Mathematics, 1883–84. Assistant Professor of Mathematics, University of Edinburgh, 1883–92. At Stanford since 1892.

†Allen, Clifford Gilmore, (123) PA 1031J
Associate Professor of Romanic Languages, 25 Alvarado

A. B., Boston, 1900; A. M., Stanford, 1903; Docteur de l'Université de Paris, 1916. Student, University of Paris, 1903–04; Fellow of Boston University and Student at Universities of Paris and Madrid, 1904–05. At Stanford since 1901.

†Allen, Warren D., (1234) PA 1151J
Organist, 2 Salvatierra

Associate, American Guild of Organists. Pupil of Rudolph Ganz and Alex. von Fielitz, Berlin, 1909–10; studied organ with C. M. Widor, Paris, 1911; member of Busoni Class, Basel, Switzerland, September, 1910; Dean of Conservatory of Music, College of the Pacific, 1913–19. At Stanford since 1918.

Allen, Yolanda Shaw, (123) PA 1151M
Instructor in Physical Training, 563 Addison

At Stanford since 1919.

†Anderson, Frederick, (134)
Instructor in French, Laurel, Menlo Park

Angell, Frank, (123) PA 87
Professor of Psychology, 1200 Bryant

B. S., Vermont, 1878; Ph. D., Leipzig, 1891; L. H. D., Vermont, 1892. Teacher in Washington (D. C.), High School, 1880–87; Assistant Professor of Psychology, Cornell University, 1891–92. At Stanford since 1892.

†Arnold, Clement Harisse, (1234) Pacific 9240
Clinical Instructor in Medicine, 177 Post, SF-sf

A. B., Stanford, 1910; M. D., Johns Hopkins, 1918. At Stanford since 1919.

†Bacher, John Adolph, (1234) Pacific 3334
Assistant Clinical Professor of Surgery (Otology, Rhinology, Laryngology), 1635 Lake, SF-sf

A. B., Stanford, 1899; M. D., Harvard, 1911. At Stanford since 1917.

[Bailey, Margery, PA 1025
Instructor in English, 1 Salvatierra]

A. B., Stanford, 1914, A. M., 1916. At Stanford since 1914.

†Barkan, Hans, (123) Pacific 3714
Assistant Clinical Professor of Surgery (Ophthalmology), 21 Commonwealth, SF-sf

A. B., Stanford, 1905; M. D., Harvard Medical School, 1910. Assistant in Pathology, Harvard Medical School, 1910–11, Instructor, 1911–12; Pathologist to the Long Island Hospital and Boston City Almshouse, 1911–12; Voluntary Assistant, II, Eye Clinic, Vienna, 1912–14. At Stanford since 1914.

Barnett, George De Forest, (123) PA 899
Assistant Clinical Professor of Medicine, 15 Mirada

A. B., Stanford, 1906, A. M., 1909, M. D., 1913. Instructor in Chemistry, Stanford University, 1909–10; Student, Johns Hopkins Medical School, 1910–12; Senior House Officer, Lane Hospital, 1914–15; Lieutenant, M. C., U. S. N. R. F., 1917–19. At Stanford since 1915.

†Bassett, Lee Emerson, (123) PA 1080
Professor of English, 9 Cabrillo

A. B., Stanford, 1901. Graduate, Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California, 1898–99; Student, School of Expression, Boston, 1901; Acting Associate Professor of Public Speaking, University of Washington, 1912–13; Professor of Public Speaking, University of Colorado, summer session, 1919. At Stanford since 1900.

†Baumberger, James Percy, (234) Mission 4668
Instructor in Physiology, 2520 Folsom, SF-sf

B. S., California, 1914; M. S., Harvard, 1916, D. Sc., 1918. Student, Yale Army Laboratory School, 1918; Assistant in Zoology, Harvard University, 1914–18; Assistant in Botany, 1918, Austin Teaching Fellow in Zoology, 1917–18; Assistant in Physiology, Radcliffe College, 1917, Assistant in Entomology, 1918; Instructor in Natural Sciences, Lowthorpe Horticulture School, 1915–18; Traumatic Shock Laboratory, A. E. F., 1918–19. At Stanford since 1919.

†Beach, Walter Greenwood, (123) PA 1172R
Professor of Social Science, 540 University

A. B., Marietta, 1888; A. B., Harvard, 1891, A. M., 1892; Professor of Philosophy and History, Marietta College for Women, 1893–97; Student, Stanford University, 1897–98; Assistant Professor and afterward Professor and Head of Department of Economic Science and History, State College of Washington, 1898–1910; Professor of Social Science, University of Washington, 1910–17; Dean of College of Sciences and Arts, and Professor of Social Science, State College of Washington, 1917–20. At Stanford since 1920.

†Becking, L. G. M. Baas, (12) PA 1318R
Acting Instructor in Botany, 666 Tennyson-p

M. S., University of Utrecht, 1919.

Beebe, Lila, (4)
Acting Instructor in Physical Education, Kingscote

Berger, Alice Ruth, (123)
Instructor in Chemistry, 73 No. 6th, San Jose

A. B., Stanford, 1908, A. M., 1913. At Stanford since 1911.

†Bering, Robert Eugene, (123) Market 8048
Lecturer on Drug Addictions, 1500 Page, SF-sf

M. D., Tulane, 1895.

†Bevis, Howard Landis, (4) PA 488R
Lecturer in Law, 818 Cowper

A. B., Cincinnati, 1908, LL. B., 1910; J. S. D., Harvard, 1920.

†Bingham, Joseph Walter, (123) PA 1100M
Professor of Law, 653 Melville

A. B., Chicago, 1902, J. D., 1904. In practice of law, Chicago, 1904–05; Acting Assistant Professor of Law, Cornell University, 1905–07; Professor of Law, University of Chicago, summer quarter, 1916. At Stanford since 1907.

†Bingham, Wilson G., ((1) L45
Assistant Professor of Military Science and Tactics (Infantry), Palo Alto Hotel-p

†Blaisdell, Frank Ellsworth, (123) Pacific 3482
Associate Professor of Surgery, 1520 Lake, SF-sf

M. D., Cooper Medical College, 1889. Demonstrator of Anatomy, Cooper Medical College, 1903, Instructor in Biology and Embryology, 1900–09, in Histology, 1907–09, Assistant Professor of Anatomy, 1904–05, Associate Professor, 1907–12. At Stanford since 1910.

Blichfeldt, Hans Frederik, (1234) PA 435
Professor of Mathematics, College Terrace

A. B., Stanford, 1896; Ph. D., Leipzig, 1898. At Stanford since 1898.

†Boardman, Walter Whitney, (1234) Fillmore 2506
Associate Clinical Professor of Medicine, 37 Walnut, SF-sf

M. D., Cooper Medical College, 1909. Assistant in Phipps Dispensary, Johns Hopkins Hospital, 1910, Assistant in Actinography and externe in Gynecology, 1911. At Stanford since 1912.

†Boezinger, Bruno, (123) PA 196
Associate Professor of German, 176 Bryant-p

A. B., Fort Worth University, 1894, A. M., 1895; Ph. D., Stanford, 1910. Instructor in German, North Texas Normal School, 1895–98; Principal, German Department, San Antonio (Texas) H. S., 1899–1906; Instructor in German, Summer School, University of Texas, 1896. At Stanford since 1906.

Boring, Edwin Garrigues, (4)
Acting Professor of Psychology (Summer Quarter), Stanford Union

†Botsford, Charles Selwyn, (1234)
Director of Intramural Athletics, 1850 Bryant-p

†Boyle, Charles Emerson, Jr., (123) PA 734M
Assistant Professor of Military Science and Tactics, 1060 High-p

Bradford, Harriet, (1234) PA 1203
Dean of Women, 2 Lasuen

A. B., Bryn Mawr, 1915. At Stanford since 1916.

†Brandsten, Ernst M., (1234) PA 1247J
Assistant Director of Physical Training and Director of Aquatics 2499 Waverley

Teacher of Swimming, Municipal Baths, Stockholm, Sweden, 1905; Swimming Coach, Neptune Swimming Club, Stockholm, 1906, University of California, 1911, 1913–15. At Stanford since 1915.

Brandsten, Greta Johannsen (Mrs.), (134) PA 1247J
Instructor in Physical Training, 2499 Waverley

At Stanford since 1916.

†Briggs, William Dinsmore, (23) PA 260M
Associate Professor of English, 249 Lowell-p

A. B., Stanford, 1896; A. M., Harvard, 1899, Ph. D., 1900. Student, Johns Hopkins University, 1896–97; Instructor in English and German, University of Vermont, 1900–01; Instructor in English, Western Reserve University, 1901–06. At Stanford since 1906.

Brinkmann, Heinrich Wilhelm, (1234) PA 1293W
Instructor in Applied Mathematics, 365 Channing

A. B., Stanford, 1920. At Stanford since 1920.

BROWN, ADELAIDE, (123) Pacific 999
Lecturer in Medicine (Child Hygiene), 45 16th Ave., SF-sf

A. B., Smith, 1888; M. D., Cooper Medical College, 1892. Interne, New England Hospital, Boston, Mass., 1893; Studying in Germany, 1894; General Practice, San Francisco, since 1894; Obstetrician to Alexander Maternity, 1899–1915.

BROWN, EVERETT SOMERVILLE, (34)
Lecturer in History, 10 Alvarado

B. L., California, 1907, M. L., 1908, Ph. D., 1917. Head of History Department, Reno (Nev.) H. S., 1908–10, of Santa Barbara H. S., 1910–11; Teacher of History and Coach of Athletics, Oakland H. S., 1911–12; Director of Physical Education, Santa Barbara City Schools, 1912–13; Head of History Department, Santa Barbara Junior College and H. S., 1913–14; Assistant in History, University of California, 1914–16; Chief of Press Clipping Section, United States Food Administration, Washington, D. C., 1917–18; American Relief Administration, 1918–19; in charge of Information Service for Herbert Hoover, Washington, D. C., 1919–20.

†BROWN, HAROLD CHAPMAN, (123) PA 1006
Associate Professor of Philosophy, Cooksey Lane

A. B., Williams, 1901; A. M., Harvard, 1903, Ph. D., 1905. Student, University of Berlin, 1903–04; Assistant in Philosophy, Harvard University, 1904–06; Instructor in Philosophy, Columbia University, 1906–14. At Stanford since 1914.

†BROWN, HENRY ALEXANDER, (123) Berkeley 1681
Clinical Instructor in Surgery, 41 El Camino Real, Berkeley-b

M. D., Medico-Chirurgical College, Philadelphia, 1900. Sometime A. A. Surgeon, Illinois Charitable Eye and Ear Infirmary, Chicago; Sometime Clinical Assistant, Royal London Ophthalmic Hospital, London, England. At Stanford since 1918.

BROWN, JOSEPH GRANT, (124) PA 461M
Assistant Professor of Physics, 1013 Ramona-p

A. B., Stanford, 1901, A. M., 1903. Graduate. Illinois State Normal University, 1894, Instructor in Physics and Chemistry, 1894–98. At Stanford since 1900.

†BROWNE, ALFRED DAVID, (1234) PA 455J
Associate Professor of Physical Education and
Medical Adviser of Men, 1157 Ramona-p

[BUCKINGHAM, ELISABETH LEE, PA 1207M
Instructor in English, 609 Kingsley-p]

A. B., Stanford, 1910, A. M., 1914. Student Columbia College of Expression, Summer, 1913; Teacher of Public Speaking, State Normal School, San Jose, 1914; Student Columbia University, 1917–18, and summer sessions, 1916, 1919. At Stanford since 1911.

BUNNELL, STERLING, (123) West 1400
Lecturer in Surgery, 516 Sutter, SF-sf

B. S., M. D., California, 1908. Interne, St. Luke's Hospital, San Francisco, 1909; Assistant in Surgery, University of California, 1912–13; Assistant in Gynecology, St. Luke's Hospital, 1915–17; Service in Gynecology, Polyclinic, 1915, in Surgery, 1916, 1917, 1920; M. C., U. S. A., 1917–18. At Stanford since 1919.

BUNTING, HELEN MASTERS, (1234) PA 860
Assistant Professor and Director of Physical Education for Women, Kingscote

Graduate, Department of Hygiene, Wellesley College, 1912. Instructor in Physical Education, Centenary Collegiate Institute, Hackettstown (N. J.), 1912–14; Director, Physical Education for Women, University of Colorado, 1914–19. At Stanford since 1919.

†BURLINGAME, LEONAS LANCELOT, (123) PA 1144
Associate Professor of Botany, 24 Alvarado

Ph. B., Ohio Northern University, 1901; A. B., Chicago, 1906, Ph. D., 1908. Instructor in Biology, Ohio Northern University, 1901–04; Fellow in Botany, University of Chicago, 1906, Assistant, 1906–08. At Stanford since 1908.

†BUTLER, EDMUND, (123) Fillmore 1985
Clinical Instructor in Surgery, 2469 Jackson, SF-sf

M. D., Cooper Medical College, 1911. Resident Surgeon and Senior Interne in Surgery, Lane Hospital, 1912–14; Surgeon, Municipal Emergency Hospital since 1914; Associate Member of Staff of St. Luke's Hospital since 1914.

CADY, BERTHA CHAPMAN (MRS.), (4)
Special Investigator in Education (U. S. Interdepartmental Social Hygiene Board), 374 Kingsley

†CADY, VERNON M., (34)
Special Investigator in Education (U. S. Interdepartmental Social Hygiene Board), 374 Kingsley

†CAJORI, FLORIAN A., (124)
Instructor in Chemistry, 1220 Byron-p

CAMPBELL, DOUGLAS HOUGHTON, (123) PA 1036
Professor of Botany, County Road

Ph. M., Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School, 1882–86; Student at Bonn, Tübingen, and Berlin, 1886–88; Professor of Botany, Indiana University, 1888–91. At Stanford since 1891.

†CANNING, JOHN BENNET, (124)
Assistant Professor of Economics, 1535 Bryant-p

Ph. B., Chicago, 1913. Graduate Scholar in Political Economy, University of Chicago, 1913–14, Assistant, 1914–15, Instructor, 1915–17. At Stanford since 1919.

†CARPENTER, FRANK BENTON, (123) Pacific 1677
Lecturer in Gynecology, 3966 Washington, SF-sf

M. D., Columbia College, 1883. Externe, Chambers Street Hospital, N. Y., 1883; Visiting Physician, Hospital for the Insane, Honolulu, 1884–85; Gynecologist, St. Luke's Hospital, San Francisco, 1900–18; Gynecologist, San Francisco Polyclinic, 1900–18; Gynecologist, San Francisco Hospital, 1902–18.

†CARRUTH, WILLIAM HERBERT, (134)
Professor of Comparative Literature, Los Altos-la

A. B., Kansas, 1880, A. M., 1883; A. M., Harvard, 1889, Ph. D., 1893. Student, Universities of Berlin and Munich, 1885–86; Morgan Fellow at Harvard University, 1888–89; Instructor in English, University of Kansas, 1879–80, Assistant Professor of Modern Languages, 1880–82, Professor, 1882–89, Professor of German, 1889–1913, Vice-President, 1901–13; Professor of German Literature, University of Wisconsin, Summer Session, 1907; President, Central Division American Modern Language Association, 1894–97. At Stanford since 1913.

†Cathcart, Arthur Martin, (1234) PA 197
Professor of Law, 1215 Emerson

A. B., Stanford, 1896. Student, Harvard University, 1896–97; Attorney at Law, Colorado Springs (Colo.), 1903–04; Lecturer in Law, University of California, Summer Session, 1908; Professor of Law, University of Chicago, Summer Quarter, 1911. At Stanford since 1904.

Catton, Joseph Henry, (123) Fillmore 94
Clinical Instructor in Medicine (Neurology), 2511 Octavia, SF-sf

B. S., California, 1911; M. D., California, 1913. Voluntary Assistant in Medicine, University of California, 1914–16, Assistant in Medicine, 1916; Chief of Medical Clinic, San Francisco Polyclinic, 1917–October, 1919; Assstant Visiting Physician, San Francisco Hospital, 1914–17, Visiting Physician, 1917. Major, M. C., U. S. A. At Stanford since 1919.

Chamberlain, William Edward, (1234)
Assistant Professor of Medicine and Director of the
X-Ray Laboratory, 3892 Sacramento, SF-sf

B. S., California, 1913, M. D., 1916. Assistant in Roentgenology, University of California Medical School, 1916–17; Visiting Roentgenologist to the French Hospital, San Francisco, 1917; Roentgenologist of U. S. Navy Base Hospital No. 2, 1917–18; Instructor in Roentgenology, University of California Medical School, 1919–20; Roentgenologist in Charge, Children's, Hahnemann, and St. Mary's Hospitals, San Francisco, 1919–20. At Stanford since 1920.

†Cheney, William Fitch, (123) Pacific 2573
Clinical Professor of Medicine, 33 Spruce, SF-sf

B. L., California, 1885; M. D., Cooper Medical College, 1889. Professor of Principles and Practice of Medicine, Cooper Medical College, 1898–1912. At Stanford since 1909.

†Clark, Arthur Bridgman, (123) PA 1023
Professor of Education (Graphic Art), 4 Cabrillo

B. Ar., Syracuse, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira (N. Y.), 1888–89; Instructor in Architecture, Syracuse University, 1889–92; Student in Painting, New York School of Art and Académie Carmen, Paris, 1898–99; Instructor in Pottery, California School of Arts and Crafts, Berkeley, Summer Session, 1913, 1914; Director, San Francisco Art Association, 1917; Lecturer, California School of Fine Arts, 1919–20. At Stanford since 1892.

Clark, George Thomas, (1234)
Librarian, 4 Lasuen

B. S., California, 1886. Assistant Librarian, University of California, 1886–87; Deputy State Librarian, California State Library, 1887–90, Classifier, 1890–94; Librarian, San Francisco Public Library, 1894–1907. At Stanford since 1907.

†Clark, James Cameron, (123) PA 267
Associate Professor of Electrical Engineering, 453 Webster-p

B. S., Iowa State College, 1907; M. E. E., Harvard, 1912; E. E., Iowa State College, 1917. Engineering Apprentice Course, Westinghouse Electric & Manufacturing Company, 1907–09; Instructor in Electrical Engineering, Case School of Applied Science, 1909–11; Transformer Engineering Specialist, General Electric Company, 1919–20. At Stanford since 1912.

†Clark, William Redwood Price, (123) West 1827
Assistant Clinical Professor of Medicine (Tuberculosis),
2710 Filbert, SF-sf

M. D., Cooper Medical College, 1899. Assistant Visiting Physician, City and County Hospital, San Francisco, 1901–04; Instructor in Medicine, Cooper

Medical College, 1905–11; Visiting Physician, Clinic of the San Francisco Association for the Study and Prevention of Tuberculosis, 1909–12; Visiting Physician, City and County Tuberculosis Hospital, San Francisco, 1911–12. At Stanford since 1911.

CLYDE, PAUL HIBBERT, (123) PA 1021J
Instructor in Journalism, 20 Lasuen
A. B., Stanford, 1920. At Stanford since 1920.

†COESTER, ALFRED, (124)
Assistant Professor of Romanic Languages, 435 Homer
A. B., Harvard, 1896, A. M., 1906, Ph. D., 1906. Student, University of Seville, Spain, 1901–02. At Stanford, Summer Quarter, 1919, and since 1920.

†COLLINS, LEROY PIERCE, (123) PA 883
Professor of Military Science and Tactics, 17 Salvatierra
Major, Field Artillery, U. S. A. At Stanford since 1919.

†CONGDON, EDGAR DAVIDSON, (23) PA 396R
Assistant Professor of Anatomy, 330 Coleridge-p
A. B., Syracuse, 1901, A. M., 1902; Ph. D., Harvard, 1909. Austin Teaching Fellow in Zoology, Harvard University, 1906–09; Hooper Traveling Fellow in Zoology of Harvard University, at University of Zürich, 1909–10; Sheldon Traveling Fellow in Zoology of Harvard University, at Biologische Versuchs Anstalt and K. K. Institut für Radiumforschungen, Vienna, 1910–11; Instructor in Embryology, Cornell University Medical College, 1911–12. At Stanford since 1912.

†COONEY, HAROLD A., (123) PA 860
Assistant Professor of Military Science and Tactics, Kingscote

†COOPER, CHARLES MINER, (123) Fillmore 1821
Associate Clinical Professor of Medicine, 2550 Buchanan, SF-sf
M. B. Ch. B., Edinburgh, 1897. Resident House Physician and House Surgeon, Royal Infirmary, Edinburgh, and Children's Hospital, Edinburgh, 1898–99; Assistant Demonstrator in Anatomy, University of Edinburgh, 1899; Instructor in Clinical Medicine and in Clinical Surgery, University of California, 1902–05; Associate Professor of Internal Medicine and Director of X-Ray Laboratory, Cooper Medical College, 1909–11. At Stanford since 1918.

†COOPER, WILLIAM ALPHA, (123) PA 593
Professor of German, 35 Salvatierra
A. B., Marietta, 1892, A. M., 1897, Litt. D., 1917. Student, Universities of Bonn, Leipzig, and Paris, 1892–94; Instructor in German and French, Marietta College, 1895–99, Professor, 1899–1901. At Stanford since 1901.

†COOVER, JOHN EDGAR, (1234) PA 933
Fellow in Psychic Research, and
Assistant Professor of Psychology, 11 Salvatierra
A. B., Stanford, 1904, A. M., 1905, Ph. D., 1912. Principal, Como (Colo.) Schools, 1898–99; Principal, Sonora (Cal.) High School, 1905–07, Dixon High School, 1907–10; Assistant in Psychology, Stanford University, 1910–12; Captain, Sanitary Corps, U. S. A., Psychological Division, Medical Research Laboratory (Military Aeronautics), 1918–19. At Stanford since 1910.

COSGRAVE, MILLICENT MARY, (1234) West 1951
Assistant Clinical Professor of Medicine (Pediatrics), 2619 Octavia, SF-sf
M. D., Cooper Medical College, 1902. Assistant, Children's Clinic, Cooper Medical College, 1904–08; Assistant, Medical Clinic, San Francisco Polyclinic, 1904–13; Chief, Gynecological Clinic, San Francisco Fruit and Flower Mission, 1906–13.

†Cottrell, Edwin Angell, (1234) PA 109
Professor of Political Science, 1130 Bryant

B. A., Swarthmore, 1907; M. A., Harvard, 1913. Instructor in Political Science, Pennsylvania State College, 1907–11, Assistant Registrar, 1909–11; Assistant in Government, Harvard University, 1911–15; Swarthmore Fellow, 1912–13; Instructor in Government, Wellesley College, 1912–17; Lecturer in Constitutional Government, Brown University, 1915–16; Secretary of the Boston Budget Commission, 1915; Assistant Secretary, Boston Chamber of Commerce, 1916–17; Executive Secretary, Massachusetts Health Insurance Commission, 1917; Professor of Political Science and Director of the Bureau of Governmental Research, Ohio State University, 1917–19; Special Investigator, United States Bureau of Efficiency, 1918. At Stanford since 1919.

†Cowan, John Francis, (1234) Pacific 4138
Associate Professor of Surgery, 587 15th Ave., SF-sf

A. B., Stanford, 1902; M. D., Cornell University Medical College, 1910. Assistant and Acting Instructor in Physiology, Stanford University, 1903–06; Instructor in Physiology, Cornell University Medical College, 1906–09; Interne, New York Hospital, 1910–12, Resident Surgeon, 1912–13. At Stanford since 1913.

Cox, Catharine Morris, (234) PA 1144
Instructor in German, 24 Alvarado

A. B., Stanford, 1912, A. M., 1913. Student, Universities of Jena and Berlin, 1913–14. Assistant Professor of German, College of the Pacific, 1914–15, Professor, 1915–20, Director of Physical Education for Women, 1918–20. At Stanford since 1921.

*†Crawford, Albert Cornelius, (123)
Professor of Pharmacology

M. D., College of Physicians and Surgeons, Baltimore, 1893. Student at Johns Hopkins University, 1887–90, 1891–94, 1903; Assistant in Pharmacology, Johns Hopkins Medical School, 1894–1900; Pharmacologist, Bureau of Plant Industry, United States Department of Agriculture, 1904–08; Physiologist, Bureau of Animal Industry, United States Department of Agriculture, 1908–10. At Stanford since 1910.

†Crook, Welton Joseph, (3)
Lecturer in Metallurgy of Iron and Steel, 22 Lasuen

A. B., Stanford, 1911, Engineer, 1919.

†Cross, Charles Norman, (123) PA 526 W
Assistant Professor of Mechanical Engineering, 26 Alvarado

M. E., Cornell, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn (N. Y.), 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905–06; Electrician with the Lackawanna Steel Co., Buffalo (N. Y.), 1906; with Turbine Research Department of General Electric Company, Lynn (Mass.), 1914–15. At Stanford since 1906.

†Cubberley, Ellwood Patterson, (1234) PA 1019
Professor of Education, and Dean of the School of Education, 12 Cabrillo

A. B., Indiana, 1891; A. M., Columbia, 1902, Ph. D., 1905. Instructor in Science, Ridgeville College (Ind.), 1891; Professor of Physical Science, Vincennes University (Ind.), 1891–93, President, 1893–96; Superintendent of City Schools, San Diego (Cal.), 1896–98; Honorary Fellow, Columbia University, 1901–02, 1904–05; Professor of Education, University of California, Summer Sessions, 1901, 1906, University of Chicago, Summer Quarter, 1910, Harvard University, second half-year, 1910–11; Visiting Professor, Columbia University, Summer Sessions, 1907, 1914, 1916, second half-year, 1915–16. At Stanford since 1898.

* Deceased, March 14, 1921.

†CUDDY, JOHN JAY, (23) — Franklin 1031
Lecturer in Advertising, — 36 Culebra, SF-sf

†CULVER, GEORGE BLISS, (1234) — PA 1365
Dean of Men, — 17 Alvarado

A. B., Stanford, 1897; LL. B., George Washington University, 1902. With Smithsonian Institution, Washington (D. C.), 1898–99. Head of Biological Department, Los Angeles High School, 1907–20. At Stanford since 1920.

†CUSHING, OSCAR KENNEDY, — Pacific 987
Lecturer in Law, — 37 7th ave.,SF-sf

†CUTTER, LAWRENCE EDMINSTER, (123) — PA 459M
Assistant Professor of Mechanical Engineering. — 627 Webster-p

A. B., Stanford, 1906. Machinist Apprentice and Journeyman, Union Iron Works, San Francisco, 1895–99, 1899–1902, 1903, 1904, Draftsman, 1905, 1906. At Stanford since 1906.

†DARSIE, MARVIN LLOYD, (234)
Acting Instructor in Education, — 360 Addison

Instructor in Education, Los Angeles State Normal School, 1914–19; Assistant Professor of Education, University of California, Southern Branch, 1919–20.

†DAVIDSON, PERCY ERWIN, (234) — Menlo Park 1243W
Associate Professor of Education, — Menlo Heights

A. B., Stanford, 1898; A. M., Harvard, 1905; Ph. D., Columbia, 1914. Teacher, Grammar and High Schools, San Diego (Cal.), 1898–1900; Supervisor of History and English Teaching, San Francisco State Normal School, 1900–03; Assistant in Education, San Diego State Normal, 1903–04; Graduate Student, Teachers' College, Columbia University, 1905–07; Instructor in Logic and History of Education, New York Training School for Teachers, 1906–07. At Stanford since 1907.

DAVIS, GORDON ARTHUR, (123) — PA 1292
Instructor in English and Dramatics, — 19 Salvatierra

A. B., Stanford, 1920. At Stanford since 1920.

†DICKSON, ERNEST CHARLES, (123) — West 5321
Associate Professor of Medicine, — 2304 Divisadero, SF-sf

B. A., Toronto, 1904, M. B., 1906, M. D., 1917. Assistant Demonstrator in Physiology, University of Toronto, 1904–05, George Brown Research Scholar, 1906–07; Assistant Resident Physician, Johns Hopkins Hospital, 1907–08; Instructor in Pathology and Bacteriology, Cooper Medical College, 1908–10; Fellow of the Rockefeller Institute for Medical Research, 1910–13. At Stanford since 1910.

†DIETRICH, WALDEMAR FENN, (123) — PA 1201R
Associate Professor of Metallurgy, — 1320 Webster

A. B., Stanford, 1913; Engineer, 1914. Acting Instructor in Mining, Stanford University, 1913–14; Engineer with Copper Queen Consolidated Mining Company, Bisbee (Ariz.), 1914–15; Engineer and later Assayer with Consolidated Arizona Smelting Company, Humboldt (Ariz.), 1916. At Stanford 1913–14, and since 1916.

†DILLON, JAMES ROOT, (1234) — Fillmore 3071
Clinical Instructor in Surgery (Genito-Urinary), — 2664 Greenwich, SF-sf

A. B., Stanford, 1908; M. D., Cooper Medical College, 1912. At Stanford since 1913.

†Doane, Rennie Wilbur, (123) PA 792R
Associate Professor of Entomology, 527 Homer

A. B., Stanford, 1896. Assistant in Zoology and Botany, Washington State College, 1896–99, Assistant Professor of Zoology and Entomology, 1899–1901; Superintendent, Fisheries Experiment Station, Keyport (Wash.), 1901–03. At Stanford since 1905.

Donovan, Monica, (123) West 6193
Clinical Instructor in Medicine (Roentgenology), 2186 California, SF-sf

A. B., Stanford, 1914, M. D., 1917. At Stanford since 1917.

†Douglas, A. Donald, (123) PA 860
Instructor in English, Kingscote

A. B., Harvard, 1914. Student, Harvard Graduate School, 1914–15; Instructor in English and German, Berkeley Preparatory School, Boston (Mass.), 1914–16; Assistant in English, Harvard University, 1916–18, Radcliffe College, 1917–18; Instructor in English, University of Missouri, 1919–20. At Stanford since 1920.

†Drew, Elmer Reginald, (123) PA 1181W
Assistant Professor of Physics, 1321 Waverley-p

B. S., California, 1888; Ph. D., Cornell, 1903. Student, University of Chicago, 1897–98, University of Berlin, 1903–05; Assistant in Physics, University of California, 1889–92, Instructor, 1892–1902. At Stanford since 1905.

†Durand, William Frederick, (123) PA 160
Professor of Mechanical Engineering, 11 Cabrillo

Graduate, U. S. Naval Academy, 1880; Ph. D., Lafayette, 1888. Engineer Corps, U. S. Navy, 1880–87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883–85, Worcester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Agricultural and Mechanical College, 1887–91; Professor of Marine Engineering and Principal, Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891–1904. At Stanford since 1904.

†Eckart, William Rankine, (123) PA 227
Professor of Mechanical Engineering, 1445 Bryant-p

M. E., Cornell, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895–96; Construction Engineer, Allison Ranch Mine, Grass Valley (Cal.), 1896–98; Testing Work for Fraser & Chalmers, in Hawaii and Mexico, 1898–99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899–1903, summers of 1904–14; Consulting Engineer, Geary St. P. & O. R. R., San Francisco, 1902–06, Columbia Steel Company since 1915, C. F. Braun & Co., since 1918. At Stanford since 1903.

†Elliott, John Elbert, (23) Market 3549
Acting Associate Professor of Mining, 776 Page, SF-sf

A. B., Stanford, 1912.

†Elliott, Orrin Leslie, (1234) PA 1045
Registrar, 5 Cabrillo

Ph. B., Cornell, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885–86, Instructor in English, 1886–91, Assistant Registrar and President's Secretary, 1890–91. At Stanford since 1891.

†Elmore, Jefferson, (134) PA 860
Associate Professor of Latin, Kingscote

A. B., Stanford, 1895, A. M., 1895, Ph. D., 1901. Principal of Merced County High School, 1895–97; Student, Universities of Bonn and Berlin, 1901–02. At Stanford since 1898.

ELOESSER, LEO, (1234) Prospect 3954
Associate Clinical Professor of Surgery, 1132 Filbert, SF-sf

B. S., University of California, 1900; M. D., Heidelberg, 1907. Volunteer Assistant, Surgical Clinic, Heidelberg, 1906; Assistant Cancer Institute, Heidelberg, 1906–07; Volunteer Assistant, Royal Surgical Clinic, Kiel, 1908–09; Volunteer Assistant, August Hospital, Berlin, 1909; Assistant in Surgery, University of California, 1910–12; Surgeon to Reserve Hospital Ettlingen and Reserve Hospital III, IV, V, Karlsruhe, 1915–16; Major M. C., U. S. A., 1918; Chief of Orthopedic Service, Letterman General Hospital, 1918–19. At Stanford since 1913.

ELY, LEONARD WHEELER, (1234)
Associate Professor of Surgery (Orthopedics), 1010 Bryant-p

A. B., Columbia, 1889; M. D., College of Physicians and Surgeons, Columbia University, 1895. At Stanford since 1913.

†EMGE, LUDWIG AUGUSTUS, (1234) Park 6964
Assistant Professor of Obstetrics and Gynecology,
36 Farnsworth Lane, SF-sf

B. S., Chicago, 1912; M. D., Rush Medical College, 1914. Assistant in Anatomy, University of Chicago, 1912–13; Special Worker in Pathology, Rush Medical College, 1913–14; Interne, Memorial Institute for Infectious Diseases and Presbyterian Hospital, 1914–15; Resident and Assistant in Gynecology and Obstetrics, University of California Hospital, 1915–17. At Stanford since 1917.

†ERWIN, ERNEST S., (1234) PA 1042J
Accountant, 23 Alvarado

†ESPINOSA, AURELIO MACEDONIO, (234)
Associate Professor of Romanic Languages, 16 Salvatierra

A. B., Colorado, 1902, A. M., 1904; Ph. D., Chicago, 1909. Assistant in Romance Languages, University of Colorado, 1901–02, Instructor, Summer Terms, 1904, 1905; Professor of Romance Languages, University of New Mexico, 1902–10; Fellow in Romance Languages and Instructor in Spanish, University of Chicago, 1908–09; Lecturer in Spanish Literature, Summer Sessions, University of Chicago, 1914, University of California, 1912, 1915; Associate Editor, *Revue de Dialectologie Romane* and of *Journal of American Folk Lore*, since 1914; Editor, *Hispania*, since 1917; Member of Advisory Editorial Board of *Inter-America*, since 1917. At Stanford since 1910.

†FABER, HAROLD KNIEST, (1234) Fillmore 3848
Associate Professor of Medicine (Pediatrics), 3320 Clay, SF-sf

A. B., Harvard, 1906; M. D., Michigan, 1911. Medical Interne, New York Hospital, 1911–13; Resident Pathologist, Babies' Hospital, New York, 1913–14; Fellow, Rockefeller Institute, New York, 1914–15. At Stanford since 1915.

†FAIRCLOUGH, HENRY RUSHTON, (123) PA 1028W
Professor of Latin, 6 Cabrillo

A. B., Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins, 1896. Fellow in Classics, University College, Toronto, 1883–84; Classical and English Master, Brockville High School, 1884–86; Graduate Scholar, Johns Hopkins University, 1886–87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887–93; Professor of Latin, University of Wisconsin, Summer Session, 1906, Columbia University, Summer Session, 1908, University of Chicago, Summer Quarter, 1910; Professor of Latin, American School of Classical Studies, Rome, 1910–11. At Stanford since 1893.

†FARRINGTON, GUY STEVENS, (123) Franklin 7768
Lecturer on Speech Defects, 2300 Van Ness, SF-sf

Assistant, Defective Speech Clinic in Pediatrics, University of California, 1915–16; Assistant, Defective Speech Clinic, San Francisco Public Schools, 1916; Assistant, Defective Speech Clinic, Oakland Public Schools, 1917; Chief of Clinic, Defective Speech, College of Physicians and Surgeons, 1918. At Stanford since 1918.

†FERRIS, GORDON FLOYD, (123) PA 1380M
Instructor in Entomology, 667 Melville
A. B., Stanford, 1916, A. M., 1918. At Stanford since 1916.

†FISH, JOHN CHARLES LOUNSBURY, (123) PA 1266
Professor of Railroad Engineering, 308 Lincoln-p
C. E., Cornell, 1892. Instructor in Civil Engineering, Cornell University, 1892–93; Division Engineer, Lake Shore & Michigan Southern Railway, 1906–08. At Stanford since 1893.

†FISHER, ARTHUR LAWRENCE, (123) Fillmore 3620
Clinical Instructor in Surgery (Orthopedics), 3333 Jackson, SF-sf
B. S., California, 1896; M. D., Johns Hopkins, 1900. Resident House Officer, Johns Hopkins Hospital, 1900–01; Fellow, Rockefeller Institute for Medical Research, 1901–02; Assistant Visiting Surgeon, Mt. Zion Hospital, San Francisco, 1902–07; Assistant in Surgery, Lane Hospital, 1907–12; Assistant in Orthopedics, Stanford Medical School, 1912–16; Instructor in Orthopedic Surgery, University of California, 1916–19. At Stanford 1912–16, and since 1920.

FISHER, WALTER KENRICK, (1234) Monterey 407W
Associate Professor of Zoology, 844 Laurel, Pacific Grove-pg
A. B., Stanford, 1901, A. M., 1903, Ph. D., 1906. Assistant, U. S. Biological Survey, 1897–1901, 1903; Assistant U. S. Fish Commission, 1902, 1904; Curator, Department of Invertebrate Zoology, California Academy of Sciences. At Stanford since 1902.

†FITZ-GERALD, JOHN DRISCOLL, (4)
Acting Professor of Romanic Languages (Summer Quarter), Madroño
A. B., Columbia, 1895, Ph. D., 1906. Scholar and Fellow in Romanic Languages, Columbia University, 1895–96, 1897–98; Student in Romanic Philology, Universities of Berlin, Paris, and Madrid, 1896–97, 1900–02; Élève Titulaire de l'École Pratique des Hautes Études, University of Paris, 1902; Assistant in Romanic Languages and Literatures, Columbia University, 1898–1902, Tutor, 1902–07, Instructor, 1907–09; Assistant Professor of Romanic Languages and Literatures, University of Illinois, 1909–15, Professor of Spanish, since 1915.

FLETCHER, HAROLD AUGUSTUS, (123) Franklin 1536
Clinical Instructor in Surgery (Otology, Rhinology, Laryngology), 804 Butler Bldg., SF-sf
B. S., California, 1912; M. D., Stanford, 1916. Interne, Lane Hospital, 1916–17; M. R. C., U. S. N., 1918–19. At Stanford since 1919.

†FOSTER, BENJAMIN OLIVER, (124)
Associate Professor of Latin, 1 Salvatierra
A. B., Stanford, 1895; A. M., Harvard, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the American School of Classical Studies in Rome, 1899–1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900–01; Instructor, University of California, Summer Session, 1908. At Stanford since 1901.

†FRANKLIN, EDWARD CURTIS, (123) PA 216
Professor of Organic Chemistry, and Dean of Graduate Study, 16 Mirada
B. S., Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldsville (La.), 1888; Chemist to the Bella Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888–90; Student, University of Berlin, 1890–91; Assistant in Chemistry, University of Kansas, 1891–93, Associate Professor, 1894–99, Professor of Physical Chemistry, 1899–1903;

Member of the U. S. Assay Commission, 1907; Chief of the Division of Chemistry, U. S. Public Health Service, Washington (D. C.), 1911–13; Member Advisory Board, Bureau of Mines, Washington (D. C.), 1917–18; Physical Chemist, Bureau of Standards, 1918; Consulting Chemist, Ordnance Bureau, 1918. At Stanford since 1903.

†Friend, Will A., (1234) PA 515J
Superintendent of the University Press, 21 Alvarado

†Gardner, David Charles, (123) PA 1068
Chaplain, and Lecturer on Biblical History and Literature, 1a Alvarado

Graduate, Church Divinity School of the Pacific, 1897, D. D., 1920. Curate St. James Mission, San Francisco, 1898; Rector of All Saints Church, Palo Alto, 1898–1902. At Stanford since 1902.

Garsed, Gwendolen Harriet, (12) PA 695
Assistant Registrar, 635 Homer-p

A. B., Stanford, 1918. At Stanford since 1918.

†Gibbons, Henry Walter, (1234) Fillmore 3740
Assistant Clinical Professor of Obstetrics and Gynecology, 3491 Pacific, SF-sf

B. S., University of California, 1899; M. D., Cooper Medical College, 1902. Instructor in Pathology, Cooper Medical College, 1905–07, Instructor in Gynecology, 1907–11. At Stanford since 1912.

†Gibbons, Morton R., (123) Pacific 1658
Lecturer on Medical Aspect of Insurance, 3979 Washington, SF-sf

A. B., University of California, 1891; M. D., Cooper Medical College, 1894. Instructor in Clinical Medicine, Cooper Medical College, 1904–09. At Stanford 1909–16, and since 1919.

Gilbert, Charles Henry, (123)
Professor of Zoology, 21 Salvatierra

B. S., Butler University, 1879; M. S., Indiana, 1882, Ph. D., 1883. Assistant in Natural Sciences and Modern Languages, Indiana University, 1880–84; Professor of Natural History, University of Cincinnati, 1884–89; Professor of Zoology, Indiana University, 1889–91; Assistant to the U. S. Bureau of Fisheries, since 1880; Assistant, in charge of scientific explorations of the U. S. S. "Albatross," 1889, 1890, 1902, 1904, 1906; in charge of salmon investigations for British Columbia since 1912. At Stanford since 1891.

†Gilman, Philip Kingsnorth, (1234) Prospect 586
Assistant Clinical Professor of Surgery, 1803 Broadway, SF-sf

A. B., Stanford, 1901; M. D., John Hopkins, 1905. Assistant Resident Surgeon, Johns Hopkins Hospital, 1905–07; Assistant Professor of Pathology, Philippine Medical School, 1907–08; Assistant Professor of Surgery, College of Medicine and Surgery, University of the Philippines, 1908–12, Professor of Surgery and Chief of Department, 1912–16; Chief Surgeon, Philippine General Hospital, 1912–16; Lieutenant, M. C., U. S. N. R., 1917–19. At Stanford since 1916.

†Girard, Frank Robert, (1234) Fillmore 4566
Assistant Clinical Professor of Obstetrics and Gynecology, 2760 Divisadero, SF-sf

M. D., California, 1903. Volunteer Assistant, Koenigliches Krankenhaus, Berlin, Germany, 1905–06; House Pathologist and House Surgeon, St. Luke's Hospital, New York, 1906–08; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1908–09; Major, M.C., U. S. A., 1917–19; Chief, Surgical Service, Base Hospital No. 47, A. E. F., France. At Stanford since 1914.

GRAHAM, HARRINGTON BIDWELL, (123) Berkeley 1215
Associate Clinical Professor of Surgery (Otology),
2419 Channing, Berkeley-b

B. S., California, 1896, M. D., 1899. Superintendent of Waldeck Sanitarium, 1899; Assistant in Surgery, San Francisco Polyclinic, 1904; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1910–11; Lieutenant Commander, U. S. N. R. F., 1918–19. At Stanford since 1912.

†GRAY, HENRY DAVID, (123) PA 1042R
Associate Professor of English, 22 Alvarado

Ph. B., Colgate, 1897; A. M., Columbia, 1898, Ph. D., 1904; Litt. D., Colgate, 1919. Assistant in eGrman and French, Colgate Academy, 1896–97; University Scholar, Columbia University, 1898–1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900–02; Instructor in English, University of Texas, 1902–05; Lecturer in English, Columbia University, Summer Session, 1905, University of Oregon, Summer Session, 1910, University of Illinois, Summer Session, 1912. At Stanford since 1905.

GREBS, EMIL, (1)
Instructor in Education (Graphic Art),
1212 Tamalpais, Berkeley-p

Student, Art Institute, Chicago, Art Students' League, New York, Art Academy, Berlin, 1895–1900; Instructor, California School of Fine Arts, 1917–19; Art Director, Foster & Kleiser Company, 1920.

GREEN, FREDERICK, (4)
Acting Professor of Law (Summer Quarter),

A. B., Harvard, 1899, A. M., 1893, LL. B., 1893. In practice of Law, New York City, 1893–1900; Professor of Law, University of Illinois, since 1904.

†GREEN, RUFUS LOT, (123) PA 1127J
Professor of Mathematics, 13 Salvatierra

B. S., Indiana, 1885, A. M., 1889. Instructor in Mathematics, Indiana University, 1885–86, Assistant Professor, 1886–88, Associate Professor, 1889–91, Professor of Pure Mathematics, 1891–93; Student, Johns Hopkins University, 1886–87. At Stanford since 1893.

HADDEN, ELIZABETH, (1234) PA 734W
Chief of Order Division, Library, 151 Kellogg-p

At Stanford since 1901.

HAGELTHORNE, SIGNE ELIZABETH, (4) West 9496
Acting Instructor in Physical Education (Summer Quarter),
2000 Vallejo, SF-sf

HALE, WILLIAM GREEN, (4)
Acting Professor of Law (Summer Quarter), 951 Bryant-p

†HALL, HOWARD JUDSON, (123) LA 10J
Assistant Professor of English, University, Los Altos

B. S., Michigan State Agricultural College, 1890; A. B., Stanford, 1896; A. M., Harvard, 1900. Professor of English, and Librarian, University of Arizona, 1891–1904; Instructor, Army Educational Corps, A. E. F. University, Beaune, Cote d'Or, France, 1919. At Stanford since 1904.

†HARBAUGH, ROSS WALLACE, (123) Pacific 5259
Clinical Instructor in Surgery, 674 10th ave., SF-sf

A. B., Stanford, 1909, M. D., 1913. Resident Physician, St. Mary's Hospital, San Francisco, 1914–15; Assistant Medical Director, State Industrial Accident Commission, 1915–20; Assistant Medical Director, Western States Life Insurance Company, 1915–20. At Stanford since 1915.

†Harcourt, Robert Henry, (123) PA 1474J
Teaching Specialist in Mechanic Arts, 440 Webster-p

Graduate, Santa Barbara State Normal School, 1917. Apprentice and Blacksmith with Risdon Iron Works, San Francisco, 1898–1901, 1903–04; with Hammond Car and Elevator Company, San Francisco, 1901–02, 1904–05; with National Iron Works, San Francisco, 1902–03; Toolman with Abner Doble Steel Company, San Francisco, 1905–06, Foreman of Forge Shop, 1906–07; Instructor in Machine Shop Practice, Forge Practice, and Sheet Metal Work, State Normal School, Santa Barbara, Summer Session, 1919. At Stanford since 1907.

Harrison, George Russell, (123) PA 1439
Instructor in Physics, Reservoir Drive

A. B., Stanford, 1919, A. M., 1920. At Stanford since 1919.

†Hartman, George Washington, (123) Prospect 4762
Lecturer on Genito-Urinary Surgery, 1005 Hyde, SF-sf

B. S., California, 1903; M. D., Johns Hopkins, 1908. Resident Physician, French Hospital, New York City, 1908, Flushing Hospital, 1909; Adjunct in Urology, German Hospital, San Francisco, 1909–18; Urologist, Franklin Hospital, San Francisco, 1918; Chief, Urological Clinic, San Francisco Polyclinic, 1918; Chief of Clinic, San Francisco Hospital, 1917–18. At Stanford since 1919.

Haven, Maude Noble (Mrs.), (1234) Fillmore 1151
Clinical Instructor in Medicine (Neurology), 611 Baker, SF-sf

Ph. B., California, 1894; M. D., Cooper Medical College, 1900. Assistant, Woman's Clinic, Children's Hospital, San Francisco, 1901–04. At Stanford 1914–16, and since 1917.

Hays, Alice Newman, (123) PA 1052J
Reference Librarian, 3 Alvarado

A. B., Stanford, 1896; B. L. S., New York State Library School, 1903. Assistant, Home Education Department, New York State Library, 1901. At Stanford since 1901.

†Heath, Harold, (123) PA 434J
Professor of Zoology, 1147 Ramona-p

A. B., Ohio Wesleyan, 1893; Ph. D., Pennsylvania, 1898; D. Sc., Ohio Wesleyan, 1919. Assistant in Biology, Ohio Wesleyan University, 1891–93; Professor of Biology, University of the Pacific, 1893–94; Harrison Fellow in Zoology, University of Pennsylvania, 1896–98. At Stanford since 1894.

*†Hempl, George, (123)
Professor of Germanic Philology,

A. B., Michigan, 1879; Ph. D., Jena, 1889; LL. D., Wisconsin, 1904, Michigan, 1915. Principal, Saginaw (Mich.) H. S., 1879–82, La Porte (Ind.) H. S., 1882–84; Instructor in German, Johns Hopkins University, 1884–86; Student, Universities of Göttingen, Tübingen, Strassburg, Jena, and Berlin, 1886–89; Assistant Professor of English, University of Michigan, 1889–93, Junior Professor, 1893–97, Professor of English Philology and General Linguistics, 1897–1906; Professor of English, University of Chicago, summer quarter, 1897; President of the American Dialect Society, 1900–05; President of the Modern Language Association, 1902–03; President of the American Philological Association, 1903–04. At Stanford since 1906.

†Henline, Henry Harrison, (123) PA 1477J
Assistant Professor of Electrical Engineering, 7 Alvarado

B. S., Illinois, 1914. Instructor in Science and Mathematics, Oktaha (Okla.) H. S., 1914–15; Graduate Chicago Central Station Institute, 1916; with Commonwealth Edison Co., 1916–17. At Stanford since 1917.

* Deceased, August 14, 1921.

†Hewlett, Albion Walter, (124) Fillmore 4477
Professor of Medicine, 2442 Union, SF-sf

B. S., University of California, 1895; M. D., Johns Hopkins, 1900. Assistant Professor of Theory and Practice of Medicine, Cooper Medical College, 1906–08; Professor of Internal Medicine, University of Michigan, 1908–16; Lieutenant-Commander U. S. N. R. F., 1917–19. At Stanford since 1916.

†Hicks, John Frederick Gross, (234) PA 1234
Instructor in Chemistry, 412 Cowper-p

B. S., Pennsylvania, 1906; M. S., Illinois, 1916, Ph. D., 1918. Instructor, Medico-Chirurgical College of Philadelphia, 1906–07; Instructor, Assistant Professor, and Professor of Chemistry, Villanova College, 1907–10; Chemist in charge of Naphthaline and Light Oil Division, Barrett Mfg. Co., 1910–12; Chemist in charge of Laboratories, Modoc Co., Inc., 1912–14; Associate Professor of Chemistry, Oklahoma State College, 1914–15; Assistant in Chemistry, University of Illinois, 1915–18; Assistant Professor and Professor of Inorganic Chemistry, Oregon State College, 1918–20.

†Hill, Harold Phillips, (123) West 967
Clinical Professor of Medicine, 2336 Steiner, SF-sf

A. B., Stanford, 1898; M. D., California, 1901. Assistant in Physiology, Department of Medicine, University of California, 1889–1901, Instructor, 1901–03; Assistant Visiting Physician, St. Luke's Hospital, 1903–06, Visiting Physician, since 1906. At Stanford since 1912.

Hirst, Francis W., (4)
Lecturer in Economics

Hogue, Elizabeth, (123) Fillmore 4704
Superintendent of Nurses and Professor of Nursing, 2336 Steiner, SF-sf

A. B., Stanford, 1901.

*Hoisholt, Andrew William, (1)
Clinical Professor of Medicine (Psychiatry)

M. D., Cooper Medical College, 1882; M. D., University of Heidelberg, 1884. Adjunct to chair of Physiology, Cooper Medical College, 1891–95; Assistant Physician, State Hospital, Stockton, 1889–1913; Superintendent, Napa State Hospital, since 1913. At Stanford since 1912.

Holcombe, Arthur Norman, (4)
Acting Professor of Political Science (Summer Quarter), 6 Lasuen

A. B., Harvard, 1906, Ph. D., 1909. Instructor in Economics, Harvard University, 1909–10, Instructor in Government, 1910–12, Assistant Professor, 1912–19, Professor since 1920; with U. S. Bureau of Efficiency, detailed for special work in Treasury Department in connection with Internal Revenue, 1918–19.

†Holman, William Ludlow, (134) PA 618R
Acting Assistant Professor of Bacteriology, 364 Kingsley

B. A., McGill, 1903, M. D. C. M., 1907. Anaesthetist, Royal Victoria Hospital, Montreal, 1907–08; Assistant in Pathology and Bacteriology, R. V. H., 1908–09; Voluntary Research Student in Bacteriology, Johns Hopkins Hospital, 1909–10; Voluntary Research Student, Institute of Hygiene, Breslau, 1910; Instructor in Bacteriology, University of Pittsburgh, 1911–12, Assistant Professor, 1912–16, Associate Professor, 1916–17, Professor, 1918–20, Lecturer in Hygiene, 1912–20; Assistant in Bacteriology, Robert Walton Goelet Research Laboratories, Ris Orangis and Paris, 1916–17. At Stanford since 1920.

* Deceased, December 17, 1920.

†Hoover, Theodore Jesse, (123) PA 997
Professor of Mining and Metallurgy, 450 Melville-p

A. B., Stanford, 1901. Assayer, Superintendent, Manager, Consulting Engineer, Managing Director, Director, and President of many mining companies in America, Europe, Asia, Africa, and Australia, 1901–19. At Stanford since 1919.

†Hoskins, Leander Miller, (123) PA 75
Professor of Applied Mathematics, 1240 Waverley-p

B. C. E. and B. S., Wisconsin, 1883, M. S., 1885, C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885–89, Assistant Professor of Mechanics, 1889–91, Professor of Theoretical and Applied Mechanics, 1891–92. At Stanford since 1892.

†Howard, Stuart A., (12) PA 1012W
Professor of Military Science and Tactics (Infantry), 16 Salvatierra

†Huston, Charles Andrews, (123) PA 644
Professor of Law, and Dean of the Law School, 21 Salvatierra

A. B., Chicago, 1902, J. D., 1907; S. J. D., Harvard, 1913. Fellow in Political Economy, University of Chicago, 1902–03, Assistant in Rhetoric, 1903–04, Associate in Rhetoric, 1904–06; Professor of Law, University of Chicago, Summer Quarter, 1914, Columbia University, Summer, 1916, Yale University, Summer Quarter, 1920. At Stanford since 1906.

†Hyde, James Macdonald, (123) PA 768W
Professor of Metallurgy, 260 Churchill-p

A. B., Stanford, 1901. Curator, California State Mining Bureau, 1901–02; Assistant Professor of Mining and Metallurgy, University of Oregon, 1903–06; Metallurgist, Guanajuato Consolidated Mining and Milling Co., Guanajuato, Mexico, 1906; Superintendent, Manhattan Ore Reduction and Refining Company, 1907; Field Agent, Mexican Syndicate, 1910; Consulting Engineer and Independent Operator, 1907–19. At Stanford since 1919.

[†Ichihashi, Yamato, PA 932
Assistant Professor of Japanese History and Government, 1010 Emerson-p]

A. B., Stanford, 1907, A. M., 1908; Ph. D., Harvard, 1914. Assistant in Economics, Stanford University, 1908–10; Special Agent for U. S. Immigration Commission, 1908–10; Graduate Student, Harvard University, 1910–12, Henry Bromfield Roger Memorial Fellow in Sociology, 1911–12. At Stanford 1908–10, and since 1913.

†Inman, Thomas George, (123) Pacific 7036
Assistant Clinical Professor of Medicine (Neurology), 4547 California, SF-sf

Ph. G., California College of Pharmacy, 1892; M. D., Cooper Medical College, 1894. Assistant Demonstrator of Anatomy, Cooper Medical College, 1895–1900, Instructor in Applied Anatomy, 1900–11; Assistant Surgeon, St. Luke's Hospital, San Francisco, 1906–13, Visiting Neurologist, since 1915; Neurologist to Navy Base Hospital No. 2, 1917, 1918. At Stanford since 1915.

†Jacobs, S. Nicholas, (123) Fillmore 4278
Lecturer on Surgery (S. F. Hospital), 3511 Jackson, SF-sf

B. S., California, 1904, M. D., 1908. Resident Physician, Trinity Hospital, 1908–10; Assistant Surgeon, San Francisco Polyclinic, 1917–18; Surgical Chief, San Francisco Polyclinic, 1920; Assistant Visiting Surgeon, San Francisco Hospital, 1917–18, Visiting Surgeon, 1920. At Stanford since 1919.

†JOHNSTON, OLIVER MARTIN, (123) PA 1040R
Professor of Romanic Languages, 4 Alvarado

A. B., Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins, 1896. Principal, Preparatory Department, Mississippi College, 1890–91, Professor of English, 1891–93; Fellow in Johns Hopkins University, 1895–96; Lecturer in French Philology, Bryn Mawr College, 1896–97; Secretary, Pacific Coast Philological Association, 1909–13, President, 1917; Professor of French, University of California, Summer Session, 1919. At Stanford since 1897.

†JONES, ELIOT, (123) PA 1031W
Professor of Economics, 31 Salvatierra

A. B., Vanderbilt, 1906; A. M., Harvard, 1908, Ph. D., 1913. Instructor in Economics, Harvard University, 1912–13, University of Pennsylvania, 1913–14; Associate Professor of Economics, Iowa State University, 1914–16; Professor of Economics, University of Texas, 1916–17; Federal Trade Commission, 1917; War Industries Board, 1918; Lecturer in Economics, University of California, Summer Session, 1920. At Stanford since 1917.

KEEFER, CHAUNCEY TENNENT, (123) L114
University Engineer, Stanford Union

A. B., Stanford, 1914.

†KELLEY, TRUMAN LEE, (1234) PA 1025
Acting Professor of Education, 1 Salvatierra

A. M., Illinois, 1911; Ph. D., Columbia, 1914. Consulting Psychologist, Culver Military Academy, 1913–14; Adjutant Professor of Educational Psychology, University of Texas, 1914–17; Assistant Professor of Education, Teachers College, Columbia University, since 1917; engaged in Psychological and Statistical work for Surgeon General's Office, Adjutant General's Office, and for Committee on Education and Special Training, 1917–18; Chief Statistician, Elementary School Intelligence Examination Board of National Research Council, Summer, 1918.

†KEMP, WILLIAM WEBB, (4) SJ 237
Acting Professor of Education (Summer Quarter),
435 S. 15th, San Jose-sj

KENDALL, LOIS M., (1234) PA 1151M
Instructor in Physical Education, 563 Addison

A. B., Wellesley, 1913. Certificate, Hygiene Department, Wellesley College, 1916; Instructor in Physical Education, Emma Willard School, Troy, N. Y., 1916–17; Director of Physical Education, Russell Sage College, Troy, N. Y., 1917–20. At Stanford since 1920.

†KENNEDY, ARTHUR GARFIELD, (123) PA 474R
Assistant Professor of English Philology, 1527 Waverley-p

A. B., Doane College, 1902; A. M., Nebraska, 1905; Ph. D., Stanford, 1914. Teacher, Chadron (Neb.) Academy, 1902–04, Norfolk (Neb.) H. S., 1905–08; Instructor in German and English, Spearfish (S. Dak.) State Normal School, 1908–12. At Stanford since 1914.

†KENNEY, WILLIAM, (123) Sunset 1310
Clinical Instructor in Medicine, 1379 6th ave., SF-sf

M. D., California, 1905. Resident Physician, St. Luke's Branch Hospital, 1906–08; Resident Physician, Relief House, 1908–14. At Stanford, 1914–16, 1917–18, and since 1919.

†KIMBERLIN, LESTER OLIN, (123) Pacific 1737
Clinical Instructor in Surgery, 124 Ortega, SF-sf

M. D., Cooper Medical College, 1911. Senior Interne, Obstetrics and Gynecology, Lane Hospital, 1912–13. At Stanford since 1918.

†Kirkwood, Marion Rice, (234) PA 436M
Professor of Law, 1325 Bryant-p

A. B., Stanford, 1909, J. D., 1911. Student, Harvard Law School, 1909–10; Assistant Professor of Law, University of Oklahoma, 1911–12. At Stanford since 1912.

†Knapp, Edward V., (123) San Anselmo 15
Clinical Instructor in Medicine, San Anselmo-sa

M. D., Cooper Medical College, 1907. Interne, City and County Hospital, San Francisco, 1907–08; Contract Surgeon, U. S. A., 1909–10; Instructor in Pathology, San Francisco Veterinary College, 1914–16; Resident Pathologist, St. Luke's Hospital, since 1911; Pathologist, Diagnostic Section, St. Luke's Hospital, San Francisco, 1915. At Stanford since 1918.

†Langnecker, Harry Leslie, (123) PA 854
Assistant Clinical Professor of Surgery (Orthopedics), 320 Embarcadero-p

A. B., Stanford, 1901; M. D., Johns Hopkins, 1906. Gynecological House Officer, Johns Hopkins Hospital, 1906–08; Orthopedic House Officer, Massachusetts General Hospital, 1908, Assistant in Orthopedic Surgery, Out-Patient Department, 1909–11, Assistant Resident Physician, 1911–13, Assistant to Orthopedic Surgeon-in-Chief, 1913–15; Lieutenant, M. C., U. S. N. R. F., 1917–19, At Stanford since 1915.

Layman, Mary H., (12) Fillmore 1953
Clinical Instructor in Medicine, 2582 Filbert, SF-sf

M. D., Ludwig-Maximilian University, Munich, 1913. Assistant, Medical and Pediatric Clinic, Munich, 1915–16; Assistant Visiting Physician, Pediatrics, San Francisco Hospital, 1917–19. At Stanford since 1917.

†Learned, Henry Barrett, (2)
Lecturer in History, Cooksey Lane

A. B., Harvard, 1890, A. M., 1897; A. M., Chicago, 1894; Ph. D., Yale, 1909. Student, University of Leipzig, 1899–1900; Teacher of History, University School, Chicago, 1892–93; in Charge of Department of History, Armour Institute, 1894–96; Assistant in History, Harvard University, 1897–98, Instructor, Harvard Summer School, 1898; Instructor in History, Sheffield Scientific School, Yale University, 1900–06; Lecturer in History, Wesleyan University, 1909–10; with Bureau of Investigation, Department of Justice, Washington (D. C.), 1917–19.

†Lemos, Pedro J., (123) PA 396J
Curator of the Museum, 460 Churchill-p

Assistant Professor of Etching and Lettering, University of California, 1910–11, Professor of Design and Applied Arts, 1911–12; Director of San Francisco Institute of Art, 1912–17; Exhibitor, Pennyslvania Academy of Fine Arts, Carnegie Institute, Pittsburgh, Brooklyn Museum of Fine Arts, Chicago Art Institute, New York Galleries, Panama-Pacific International Exposition; editor of the School Arts Magazine. At Stanford since 1917.

†Lenox, Lionel Remond, (123) Mt. View 47
Professor of Analytical Chemistry, Mountain View

Ph. B., Columbia, 1888. Assistant Chemist, Bethlehem Steel Co., 1887; Instructor in Chemistry, Lehigh University, 1888–91; Chemist, Ordnance Department, U. S. N., Washington (D. C.), 1891–92; Chief Chemist, Conkling Iron Co., 1888–92; Chemist, Allan Cement Co., 1890–91. At Stanford since 1892.

†Lesley, Everett Parker, (123) PA 253
Professor of Mechanical Engineering, 18 Alvarado

A. B., Stanford, 1897; M. M. E., Cornell, 1905. Apprentice and Foreman in Union Iron Works, San Francisco, 1897–1903; Assistant Inspector to Naval Constructor, 1903–04; Draftsman at U. S. Experimental Model Basin, Washington (D. C.), 1905–07. At Stanford since 1907.

LEVESQUE, RENÉ, (4)
Acting Assistant Professor of French, Madroño

†LIGGETT, JAMES BENNETT, (123) PA 824J
Teaching Specialist in Foundry Practice, 760 Waverley-p
Apprentice and Foundry Molder, Falls Rivet and Machine Co., Cuyahoga Falls (Ohio), 1883–88, Webster, Camp & Lane, Akron (Ohio), 1888–93, Bowler & Co., Cleveland (Ohio), 1893–98, Cleveland Steel Casting Co., 1898–99; Foreman, Born Steel Range Co., Cleveland (Ohio), 1899–1902, Westinghouse Electric Co., Cleveland (Ohio), 1902. At Stanford since 1902.

LOTHROP, MARGARET MULFORD, (134) PA 1028W
Instructor in Economics, 6 Cabrillo
A. B., Smith, 1905; A. M., Stanford, 1915. At Stanford since 1915.

LUTZ, RALPH HASWELL, (124) PA 860
Associate Professor of History, Kingscote
A. B., Stanford, 1906; LL. B., Washington, 1907; Ph. D., Heidelberg, 1910. Student, Universities of California (summer, 1906), Bonn and Heidelberg (1907–10), Berlin (summer, 1913); Instructor in History, University of Washington, 1911–16, Assistant Professor, 1916–20. At Stanford since 1920.

MCCLENAHAN, HENRY CORBIN, (123) Franklin 7882
Lecturer in Medicine (Neurology), 1105 Greenwich Terrace, SF-sf
M. D., Tulane, 1895. Associate Professor of Nervous and Mental Diseases and Legal Medicine, Cooper Medical College, 1910–12. At Stanford since 1919.

†MCCLINTOCK, MILLER L., (234) PA 1107R
Instructor in English, 1228 Byron-p
A. B., Stanford, 1918, A. M., 1920. At Stanford since 1918.

MCCRACKEN, ISABEL, (1234) PA 1127W
Assistant Professor of Entomology, 1 Arguello
A. B., Stanford, 1904, A. M., 1905, Ph. D., 1908. Student, Paris and London, 1912–13. At Stanford since 1904.

†MCDOWELL, JOHN EZRA, (1234)
Academic Secretary, and Alumni Secretary, Los Altos
A. B., Stanford, 1900. At Stanford since 1900.

†MCFARLAND, FRANK MACE, (123) PA 480
Professor of Histology, 2 Cabrillo
Ph. B., De Pauw, 1889; A. M., Stanford, 1893; Ph. D., Würzburg, 1896. Professor of Biology and Geology, Olivet College, 1889–92; Student, Würzburg, Zürich, and Naples, 1894–96. At Stanford since 1892.

†MCKEE, ALBERT BROWN, (123) Redwood 1704F4
Clinical Professor of Surgery (Ophthalmology), Redwood City-r
Ph. B., University of the Pacific, 1883, Ph. M., 1886; M. D., Cooper Medical College, 1886. Instructor and Acting Head of the Eye, Ear, Nose, and Throat Division, University of California Medical Department, 1902–08; Associate Professor of Ophthalmology, Cooper Medical College, 1908–12. At Stanford since 1912.

†MCMURPHY, JAMES IRA WILSON, (123)
Assistant Professor of Botany, 411 Yale, College Terrace
A. B., Stanford, 1908, A. M., 1909. At Stanford since 1908.

†McNAUGHT, HARVARD YOUNG, (1234) Pacific 8561
Associate Clinical Professor of Surgery (Otology, Rhinology, Laryngology), 144 27th ave., SF-sf

M. D. C. M., Trinity University, 1897. Fellow by Examination, Trinity Medical College, 1897; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1911–12. At Stanford since 1913.

†MALONEY, HENRY WILFRED, (1234) PA 696
Associate Director of Physical Training, and Director of Minor Sports, 176 Waverley

Graduate Army Gymnastic School, Curragh, Ireland, 1899; Sergeant-Instructor in Gymnastics and Fencing, British Army, 1899–1903; Conductor of Private Gymnasium, Pasadena (Cal.), 1904–08. At Stanford since 1908.

†MANNING, WILLIAM ALBERT, (123) PA 689R
Associate Professor of Applied Mathematics, 604 Tennyson-p

A. B., Willamette University, 1900; A. M., Stanford, 1902, Ph. D., 1904. Student, University of Paris, 1904–05; Acting Assistant Professor of Mathematics, University of Illinois, 1909–10. At Stanford since 1900.

[†MANWARING, WILFRED HAMILTON,
Professor of Bacteriology and Experimental Pathology, 364 Kingsley-p]

B. S., Michigan, 1895; M. D., Johns Hopkins, 1904. Fellow and Assistant in Pathology, University of Chicago, 1904–05; Associate Professor of Pathology, Indiana University, 1905–07; Traveling Fellow, Rockefeller Institute, 1907–08, v. Wassermann's Laboratory, Berlin, 1907–08; Ehrlich's Laboratory, Frankfort-on-Main, 1908–09, Lister Institute of Preventive Medicine, London, 1909–10; Assistant in Pathology, Rockefeller Institute, 1910–13; Lecturer in Functional Pathology, Washington University Medical School, 1920–21. At Stanford since 1913.

†MARTIN, ERNEST GALE, (123)
Professor of Physiology, 1525 Waverley

Ph. B., Hamline, 1897; Ph. D., Johns Hopkins, 1904. Assistant in Biology, Hamline University, 1896–97; Fellow in Physiology, Johns Hopkins University, 1902–03, Assistant, 1903–04; Instructor in Anatomy and Physiology, Purdue University, 1904–06; Instructor in Physiology, Harvard University, 1906–10, Assistant Professor, 1910–16; Instructor in Physiology, Simmons College, 1907–08; Lecturer in Physiology, Sargent School for Physical Education, 1906–14; Assistant Professor of Physiology, Radcliffe College, 1914–16. At Stanford since 1916.

†MARTIN, ERNEST WHITNEY, (123) PA 132
Associate Professor of Greek, 525 Lincoln

A. B., Chicago, 1900; A. M., Stanford, 1902, Ph. D., 1910. Instructor in Latin and Greek, Private School, Clarinda (Ia.), 1895–96, Principal of High School, 1896–98; Student, University of Berlin and American School of Classical Studies, Rome, 1900–01; Acting Professor of Latin and Greek, University of Nevada, 1908–09, Professor of Greek, 1909–10. At Stanford since 1901.

†MARTIN, PERCY ALVIN, (123) PA 1081R
Associate Professor of European History, 29 Salvatierra

A. B., Stanford, 1902, A. M., 1903; A. M., Harvard, 1907, Ph. D., 1912. Student, University of Paris, 1903–04, Universities of Berlin and Leipzig, 1907–08; Fellow, Harvard University, 1908; Professor of History and French, Whittier College, 1904–05; Lecturer in Latin-American History, Harvard University, 1915; Lecturer in South American History and Institutions, University of Washington, Summer Session, 1916. At Stanford since 1908.

†MARX, CHARLES DAVID, (123) PA 255
Professor of Civil Engineering, 357 Kingsley

B. C. E., Cornell, 1878; C. E., Karlsruhe Polytechnicum, 1881; LL. D., California, 1918. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880–81; U. S. Assistant Engineer, Missouri and Mississippi River Improvement, 1882–84; Assistant Professor of Civil Engineering, Cornell University, 1884–90; Professor of Civil Engineering, University of Wisconsin, 1890–91. At Stanford since 1891.

†MARX, GUIDO HUGO, (123) PA 715
Professor of Machine Design, 356 Lincoln

M. E., Cornell, 1893. With Gleason Tool Co., Rochester (N. Y.), 1893–94; with Bement, Miles & Co., Philadelphia, 1894–95. At Stanford since 1895.

†MEARS, ELIOT GRINNELL, (23) PA 860
Acting Professor of Economics, Kingscote

A. B., Harvard, 1910, M. B. A., 1912. Secretary and Instructor, Harvard Graduate School of Business Administration, 1912–16; Chief, Foreign Service Division, and later American Trade Commissioner in the Near East, United States Bureau of Foreign and Domestic Commerce, since 1916; Commercial Attaché to American High Commission in Turkey, 1919–20; Economist, Harbord Military Mission to Armenia and Transcaucasia, 1919.

MEHRTENS, HENRY GEORGE, (1234) West 6193
Assistant Clinical Professor of Medicine (Neurology), Lane Hospital, SF-sf

B. S., California, 1911; M. D., Stanford, 1913. Senior House Officer, Lane Hospital, 1914–15, House Physician, since 1915. At Stanford since 1915.

MERRILL, MAUD AMANDA, (123) PA 1471
Instructor in Psychology, Kingscote

A. B., Oberlin, 1911; A. M., Stanford, 1920. At Stanford since 1920.

†MEYER, ARTHUR WILLIAM, (123) PA 1225
Professor of Anatomy, 121 Waverley-p

B. S., Wisconsin, 1898; M. D., Johns Hopkins, 1905. Assistant and Instructor in Anatomy, Johns Hopkins University, 1905–07; Assistant Professor of Anatomy, University of Minnesota, 1907–08; Professor of Anatomy, Northwestern University, 1908–09; Research Associate, Carnegie Institution, 1917–18. At Stanford since 1909.

MILLS, LOUIS D., (3)
Lecturer in Metallurgy of Cyanide Solutions, Redwood City-r

MIRRIELEES, EDITH RONALD, (34)
Instructor in English, 7 Alvarado

A. B., Stanford, 1907. At Stanford since 1909.

†MITCHELL, JOHN PEARCE, (1234) PA 722
Associate Professor of Chemistry, 235 Embarcadero

A. B., Stanford, 1903, A. M., 1904, Ph. D., 1909. Student, University of Leipzig, 1904–05. At Stanford 1903–04, and since 1905.

†MOORE, CHESTER BIVEN, (1234) Fillmore 922
Clinical Instructor in Obstetrics and Gynecology, 2327 Divisadero, SF-sf

B. S., California, 1906, M. D., 1910. Interne, University of California Hospital, 1910–11; House Officer, Children's Hospital, Boston, 1911–12. At Stanford since 1913.

†Moreno, Halcott Cadwalader, (1234) PA 526J
Professor of Applied Mathematics, 28 Alvarado

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark, 1900. Tutor in Mathematics, University of Georgia, 1893–97; Scholar and Fellow in Mathematics, Clark University, 1897–1900, Assistant in Mathematics, 1900–01. At Stanford since 1901.

†Moser, Charles, (123) PA 592J
Assistant Professor of Civil Engineering, 651 Homer-p

C. E., Ohio Northern University, 1902; A. B., Stanford, 1908. At Stanford since 1908.

Mosher, Clelia Duel, (1234) PA 23
Assistant Professor of Personal Hygiene, and Medical Adviser of Women, 1094 Emerson

A. B., Stanford, 1893, A. M., 1894; M. D., Johns Hopkins, 1900. Assistant in Hygiene and Physical Training, Stanford University, 1893–94, Instructor, 1894–96; Externe in the Johns Hopkins Hospital Dispensary, and Gynecological Assistant in Dr. Howard A. Kelly's Sanatorium, Baltimore (Md.), 1900–01; Physician, Palo Alto, 1901–10. At Stanford, 1893–96, and since 1910.

†Murray, Augustus Taber, (234) PA 1405
Professor of Greek, 1019 Bryant

A. B., Haverford, 1885; Ph. D., Johns Hopkins, 1890. Fellow in Johns Hopkins University, 1887–88; Professor of Greek, Earlham College, 1888–90; Student, Universities of Leipzig and Berlin, 1890–91; Professor of Greek, Colorado College, 1891–92. At Stanford since 1892.

Murray, Margaret, (1234) PA 1219J
Secretary to the Comptroller, 1011 Fulton

Muse, Maude, (123) West 6193
Instructor in Theory of Nursing, Lane Hospital, SF-sf

†O'Connor, Roderic, (123) Oakland 4009
Clinical Instructor in Surgery (Ophthalmology), 1206 Broadway, Oakland-o

M. D., Pennsylvania, 1900. Interne, St. Mary's Hospital, Philadelphia; First Lieutenant, Medical Corps, U. S. A., 1901; Honor Graduate, Army Medical School, 1902; Major, Medical Corps, U. S. A., 1910–14. At Stanford since 1918.

Oliver, Harry Reeves, (1) Fillmore 1720
Assistant Clinical Professor of Medicine (Serology), 2749 Union, SF-sf

M. D., Cooper Medical College, 1898. Assistant in Pathology, Cooper Medical College, 1898–1904, Instructor, 1904–06, Assistant Professor, 1906–11, Associate Professor of Clinical Pathology, 1911–12, Serologist, 1912. At Stanford since 1909.

†Oliver, Jean Redman, (1234) Franklin 3191
Associate Professor of Pathology, 1246 Lombard, SF-sf

A. B., Stanford, 1911, M. D., 1914. Assistant in Pathology and Bacteriology, Rockefeller Institute for Medical Research, 1916–18, Associate, 1919; First Lieutenant and Major, M. C., U. S. A., Camp Meade (Md.); Group Laboratory Officer, Justice Hospital Group, Toul, France; Detailed on Medical History of the War, Central Medical Department Laboratory, Dijon, France, and Surgeon General's Office, Washington (D. C.), 1917–19. At Stanford 1914–16, and since 1919.

OLMSTEAD, JAMES MONTROSE DUNCAN, (4)
Acting Instructor in Physiology (Summer Quarter),
Pacific Grove-pg

A. B., Middlebury, 1907; B. A., Oxford, 1911, M. A., 1914; A. M., Harvard, 1918, Ph. D., 1920. Vice-Principal, Spring Valley (N. Y.) H. S., 1907–08; Rhodes Scholar at Oxford University, 1908–11; Professor of Natural Science, Shorter College, 1912–15; Assistant in Zoology, Harvard University, 1915–17, Austin Teaching Fellow, 1919–20; Associate in Physiology, College of Medicine, University of Illinois, 1920; Associate Professor of Physiology, University of Toronto, since 1920.

†O'NEILL, ARTHUR ALOYSIUS, (1234) Park 6196
Clinical Instructor in Medicine (Pediatrics), 100 Dolores, SF-sf

M. D., Cooper Medical College, 1891. Assistant Surgeon, Cooper Medical College Clinic, 1893; Assistant in Diseases of the Skin, San Francisco Polyclinic, since 1902; in charge of Isolation and Plague Hospital, 1907–10, of Isolation Hospital, 1912. At Stanford since 1913.

OPHÜLS, LOUISE, (123) West 2892
Medical Librarian, Lane Medical Library,
2186 California, SF-sf

At Stanford since 1910.

†OPHÜLS, WILLIAM, (1234) Fillmore 1680
Dean of the Medical School, and Professor of Pathology,
2398 Sacramento, SF-sf

M. D., University of Göttingen, 1895. Assistant at the Pathologic Institute at Göttingen, 1896–97; Professor of Pathology and Bacteriology, University of Missouri, 1897–98; Professor of Pathology and Bacteriology, Cooper Medical College, 1898–1912; Pathologist, Lane Hospital, snice 1898; Instructor in Pathology, Training School for Military Officers, U. S. A., 1918. At Stanford since 1909.

†OSBORNE, GEORGE EDWARD, (4)
Acting Assistant Professor of Law (Summer Quarter),
7 Alvarado

†OSGOOD, CHARLES GROSVENOR, (4)
Acting Assistant Professor of English (Summer Quarter),
425 Embarcadero

A. B., Yale, 1894, Pr. D., 1899. Assistant Professor of English, University of Colorado, 1899; Instructor in English, Yale University, 1899–1905; Preceptor in English, Princeton University, 1905–13, Professor, since 1913.

OSTENBERG, ZENO, (3)
Instructor in Pharmacology, 2436 Clay, SF-sf

†OWENS, WILLIAM BROWNLEE, (1234) PA 1170W
Associate Professor of Law, 19 Alvarado

LL. B., Stanford, 1915. At Stanford, 1915–16, and since 1920.

†PALMATEER, THERON J., (14) PA 423W
Teaching Specialist in Mechanic Arts, 602 Cowper-p

Apprentice with Sibley & Ware, South Bend (Ind.); Journeyman Machinist, 1896–1905, with R. Hoe & Co., New York, Columbus Machine Works, Columbus (Ohio), Elems Engineering Works, Chicago, Western Gas Engine Works, Mishawaka (Ind.), Webster Iron Works, Bakersfield (Cal.), R. S. Hunkins, San Jose (Cal.). At Stanford since 1904.

PALMER, CAROLINE B., (123) West 6523
Clinical Instructor in Surgery (Anesthetics), 2401 Sacramento, SF-sf
M. D., Cooper Medical College, 1906. Chief Anesthetist, Lane Hospital, since 1909. At Stanford since 1917.

†PARK, CHARLES V., (1234) PA 1188W
Assistant Librarian, 1080 Emerson-p
A. B., Stanford, 1919. Certificate, New York Public Library, Library School, 1915. At Stanford since 1909.

†PARKS, GEORGE SUTTON, (123)
Instructor in Chemistry, 265 Channing-p

†PEIRCE, GEORGE JAMES, (4) PA 1226J
Professor of Botany and Plant Physiology, 281 Embarcadero
S. B., Harvard, 1890; A. M. and Ph. D., Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890–92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892–94; Assistant Professor of Botany, Indiana University, 1895–97; Acting Professor of Botany, University of Wisconsin, second semester, 1910–11. At Stanford since 1897.

†PIERSON, PHILIP HALE, (1234) Pacific 7907
Clinical Instructor in Medicine, 734 12th ave., SF-sf
A. B., Yale, 1908; M. D., Harvard, 1913. House Officer, Massachusetts General Hospital, 1914–15. At Stanford since 1916.

POWELL, WALTER DANIEL, (1234) PA 970
Director of Major Intercollegiate Athletics, Stanford Union
A. B., Wisconsin, 1914.

POWER, RICHARD H., (23) PA 406W
Assistant Professor of Military Science and Tactics, 1106 Bryant
Captain, U. S. A., retired. At Stanford since 1920.

†PRICE, GEORGE CLINTON, (123) PA 1053
Professor of Zoology, 5 Alvarado
B. S., De Pauw, 1890; Ph. D., Stanford, 1897. Student in Biology, Johns Hopkins University, 1890–92, University of Munich, 1895–96. At Stanford since 1892.

†PROCTOR, WILLIAM MARTIN, (1234) PA 1040J
Assistant Professor of Education, 5 Salvatierra
A. B., Whitman, 1901; A. M., Stanford, 1916, Ph. D., 1919. Teacher of History and Civics, Cheney (Wash.) State Normal School, 1909–10; Professor of Education, Pacific University, Forest Grove, Oregon, 1911–15, Dean of Faculty, 1914–15. At Stanford since 1916.

PUTNAM, DOROTHY, (1234) PA 659
Secretary, School of Education, 625 Guinda
A. B., Stanford, 1916.

†RAKESTRAW, NORRIS WATSON, (1234) PA 1141J
Instructor in Chemistry, 677 Melville-p
A. B., Stanford, 1916, A. M., 1917.

READ, JAY MARION, (123) West 8705
Clinical Instructor in Medicine, 1571 Fulton, SF-sf
B. S., California, 1912, M. S., 1913; M. D., Stanford, 1915. Assistant, Medical Clinic, Stanford Service, San Francisco Hospital, since 1916; Captain, M. R. C., U. S. A., 1917–19.

†Reed, Alfred Cummings, (1234) Bayview 841
Assistant Clinical Professor of Medicine, 327 21st ave., SF-sf

A. B., Pomona, 1906; M. D., Bellevue Medical College, 1910. Instructor in Pharmacology, Bellevue Medical College, 1910–11; Assistant Surgeon, U. S. Public Health Service, 1911–13; Attending Physician, Yale Hospital, Changsha, China, 1913–15; Lieutenant, M. C., U. S. N. R. F., 1917–19; Chief of Medical Service, Mare Island Naval Hospital, 1918–19; Editor California State Journal of Medicine, since 1917. At Stanford since 1916.

†Rendtorff, Karl Gustav, (234) PA 335J
Professor of German, 30 Alvarado

A. M., Stanford, 1894, Ph. D., 1896. Student, University of Giessen, 1884–85, University of Kiel, 1885–91. At Stanford since 1894.

†Rigdon, Rufus Lee, (123) Fillmore 2285
Clinical Professor of Surgery (Genito-Urinary), 1617 Broderick, SF-sf

M. D., Cooper Medical College, 1887. Assistant and Instructor in Genito-Urinary Clinic, Cooper Medical College, 1888–98, Associate Professor of Genito-Urinary Surgery and Chief of Genito-Urinary Clinic, 1898–1908, Professor of Genito-Urinary Surgery, 1908–12. At Stanford since 1912.

Ritter, Arthur John, (123) San Anselmo 8
Lecturer on Mental Deficiency, Ross-r

Graduate Teachers' College, Zürich (Switzerland), 1897; Research Assistant, Racial Studies, Johannesburg (South Africa), 1898–1901; Student, Paris, 1902–03; Instructeur des enfants arrières, Paris, 1904–05; Private Case Work with Feeble-minded Children, 1906–11; Home School for Nervous and Backward Children, 1912; Lecturer, Department of Criminology, University of California, Summer Session, 1920. At Stanford since 1916.

†Rixford, Emmet, (123) Franklin 5100
Professor of Surgery, 1795 California, SF-sf

B. S., California, 1887; M. D., Cooper Medical College, 1891. Adjunct Professor of Surgery, Cooper Medical College, 1893–98, Professor, 1898–1912; Visiting Surgeon, Lane Hospital, 1895, City and County Hospital, San Francisco, since 1899; Instructor in Surgery, Training School for Military Officers, U. S. A., 1918. At Stanford since 1909.

†Robinson, Edgar Eugene, (23) PA 515W
Associate Professor of American History, 27 Salvatierra

A. B., Wisconsin, 1908, A. M., 1910. Assistant in History, University of Wisconsin, 1908–09, Fellow in American History, 1909–10; Assistant Professor of History, Carleton College, 1910–11; Instructor in History, University of Minnesota, Summer Session, 1912, Resident Lecturer, 1915–16; Assistant Professor of History, University of Michigan, Summer Session, 1916; Assistant Educational Director, S. A. T. C., 1918; Visiting Professor of American History, Yale University, 1919–20. At Stanford since 1911.

†Rogers, Austin Flint, (123) PA 1081W
Professor of Mineralogy, 15 Salvatierra

A. B., Kansas, 1899, A. M., 1900; Ph. D., Columbia, 1902. Assistant in Mineralogy, University of Kansas, 1898–1900; Assistant Geologist, University Geological Survey of Kansas, 1898–1900, 1903; Fellow in Mineralogy, Columbia University, 1900–02, Tutor in Mineralogy, 1902–05. At Stanford since 1905.

†Rogers, Frederick John, (123) SJ 4589
Associate Professor of Physics, 550 S. 6th, San Jose

M. S., Cornell, 1891. Instructor in Physics, Cornell University, 1892–1900. At Stanford since 1900.

ROGERS, FREDERICK RAND, (4)
Acting Instructor in Physical Education (Summer Quarter), Waverley

A. B., Stanford, 1920.

ROOT, ROBERT KILBURN, (4)
Acting Professor of English (Summer Quarter),

A. B., Yale, 1898, Ph. D., 1902. Tutor in English, Yale University, 1900–03, Instructor, 1903–05; Assistant Professor of English, Princeton University, 1905–16, Professor, since 1916.

†ROSS, PERLEY ASON, (123) PA 689J
Assistant Professor of Physics, 1830 Cowper-p

A. B., Stanford, 1908, A. M., 1910, Ph. D., 1911. At Stanford since 1908.

†ROTH, ALMON EDWARD, (1234) PA 900 L 1
Comptroller, Santa Teresa

A. B., Stanford, 1909, J. D., 1912.

†RUMWELL, MELVILLE E., (123) Douglas 315, Fillmore 808
Associate Clinical Professor of Surgery, 3467 Pacific, SF-sf

M. D., Cooper Medical College, 1895. Instructor, Cooper Medical College, 1900–08; Visiting Phyiscian, San Francisco Hospital, 1900–08; Chief, Surgical Clinic, Fruit and Flower Mission, 1908–10; Assistant, Surgical Clinic, Stanford Medical School, 1913–17. At Stanford since 1915.

RUSSELL, FRANCES THERESA (Mrs.), (1234) PA 1081M
Assistant Professor of English, 30 Alvarado

Ph. B., Iowa, 1895; Ph. D., Columbia, 1920. Teacher in Denison (Ia.) Normal School, 1895–96; Principal, Villisca (Ia.) High School, 1896–98; Graduate Student at Radcliffe College, 1898–99; Teacher in Anamosa (Ia.) High School, 1899–1900. At Stanford since 1905.

†RUSSELL, FRANK MARION, (123)
Acting Assistant Professor of Political Science, 7 Salvatierra

A. B., Stanford, 1912, A. M., 1913. Student, Columbia University, 1915; Assistant Professor of Political Science, University of Nevada, 1916; Instructor, State College of Washington, 1917–18. Assistant Professor, 1918–19; Assistant Professor of Political Science, University of Washington, Summer Session, 1919. At Stanford since 1919.

†RUSSELL, TRACY GEORGE, (123) Sutter 7070
Lecturer on Surgery (S. F. Hospital), Hotel Cartwright, SF-sf

A. B., Stanford, 1895; M. D., Columbia, 1899. Surgical Interne, St. Luke's Hospital, New York, 1899–1901; Assistant in Surgery, University of California, 1901–11; Attending Surgeon, San Francisco Hospital, 1906–18, San Francisco Polyclinic, 1910–18.

†RYAN, HARRIS JOSEPH, (123) PA 1075
Professor of Electrical Engineering, 525 Embarcadero

M. E., Cornell, 1887. With Western Engineering Co., Lincoln (Neb.), 1887–88; Instructor in Physics, Cornell University, 1888–89; Assistant Professor of Electrical Engineering, 1889–92, Associate Professor, 1892–95; Professor, 1895–1905; Judge, Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904. At Stanford since 1905.

RYFKOGEL, HENRY ANTHON LEWIS, (123) Franklin 2241
Lecturer on Surgery, Bohemian Club, SF-sf

M. D., California, 1894. Instructor in Anatomy, University of California, 1894–95, Instructor in Clinical Pathology, Medical Department, 1895–1900, Instructor in Bacteriology, 1900–06, in Surgical Pathology, 1906–07; Surgeon, San Francisco Polyclinic, and Visiting Surgeon, St. Francis Hospital, since 1904.

SANDERS, NATHANIEL, (1234) PA 1035
Instructor in Economics, 22 Lasuen
A. B., California, 1898. At Stanford since 1918.

†SCHALLER, WALTER FRANK, (123) Market 5863
Associate Clinical Professor of Medicine (Neurology), 156 Sea Cliff, SF-sf
M. D., Cooper Medical College, 1902. Assistant in Pathology, Cooper Medical College, 1905–06; Assistant Surgeon, U. S. N., 1906–08. At Stanford since 1911.

†SCHAUPP, KARL LUDWIG, (1234) Pacific 3417
Clinical Instructor in Obstetrics and Gynecology, 437 Lake, SF-sf
A. B., Stanford, 1913, M. D., 1916. Senior Interne, Obstetrics and Gynecology, Lane Hospital, 1916–17; Visiting Obstetrician, San Francisco Hospital, since 1918.

†SCHULTZ, EDWIN WILLIAM, (1234)
Assistant Professor of Bacteriology, Menlo Park
B. S., Winona College, 1913; A. B., Michigan, 1914; M. D., Johns Hopkins, 1917. Special Student in Protozoology, School of Hygiene and Public Health, Johns Hopkins, Autumn Quarter, 1919–20; Field Director, International Health Board, 1917; Chief of Laboratory, 33d Division, U. S. Army, and Pathologist, Base Hospital No. 42, A. E. F., 1917–18; Chief of Laboratory, A. R. C. Military Hospital No. 9, A. E. F.; Bacteriologist, A. R. C. Commission to Germany, and Chief of Bureau of Medical Research, A. R. C. Commission to Poland, 1918–19; First Lieutenant and Captain, M. C., U. S. A., and Deputy Commissioner (Major, U. S. A.), American Red Cross, 1917–19; Major, M. R. C., U. S. A. At Stanford since January, 1920.

SCHWARTZ, WILLIAM LEONARD, (123) PA 1025
Instructor in French, 1 Salvatierra
A. B., Ohio Wesleyan, 1910; A. M., Stanford, 1920. Professor of English, Kagoshima 7th Government College, Japan, 1910–14, Nagasaki Imperial College of Commerce, 1914–19; Professor of French, College of the Pacific, 1919–20. At Stanford since 1920.

[†SEARS, JESSE BRUNDAGE, PA 1145W
Associate Professor of Education, 270 Stanford-p]
A. B., Stanford, 1909; Ph. D., Teachers' College, Columbia, 1920. Student, University of Chicago, Summer Quarter, 1910; Research Scholar, Teachers' College, Columbia University, 1910–11; Instructor in Education, University of Wisconsin, 1909–10; Assistant in Educational Sociology, Teachers' College, Columbia University, Summer Session, 1911. At Stanford since 1911.

†SEAY, WELLFORD DUFFY, (1234) PA 734R
Associate Director of Major Intercollegiate Athletics, 256 Kellogg-p
A. B., Occidental, 1913. Student, University of Southern California, 1913–14; Teacher of History, Pasadena H. S., 1914–17; First Lieutenant, 364th Infantry, U. S. A., 1917–19; Teacher of History and Military Commandant, Pasadena H. S., 1919–20. At Stanford since 1920.

SELLING, NATHALIE, (123) Fillmore 2123
Clinical Instructor in Medicine (Electrotherapy), 2404 Clay, SF-sf
M. D., California, 1894. At Stanford since 1917.

†SEWELL, CHESTER DURBIN, (123) Fillmore 3736
Clinical Instructor in Medicine, 2010 Vallejo, SF-sf
M. D., Cooper Medical College, 1906. At Stanford since 1914.

†Sewall, Edward Cecil, (123) Fillmore 4242
Clinical Professor of Surgery (Otology, Rhinology, Laryngology), 3515 Pacific, SF-sf

A. B., Stanford, 1898; M. D., Cooper Medical College, 1902. Assistant and Instructor in Ophthalmology, Cooper Medical College, 1901–07, Assistant Professor, 1907–09; Student in Freiburg, 1909–10; Associate Professor of Diseases of Eye, Ear, Nose, and Throat, Cooper Medical College, 1910–12. At Stanford since 1912.

†Seward, Samuel Swayze, Jr., (123) PA 779W
Associate Professor of English, 262 Kingsley-p

A. B., Columbia, 1896, A. M., 1897. Scholar in Literature, Columbia University, 1896–97, Assistant in Literature, 1897–99; Student, Oxford University, 1899–1900; Acting Professor of English, University of Nevada, 1907; Assistant Professor of English, University of California, Summer Session, 1907, University of Oregon, Summer Session, 1908. At Stanford since 1900.

†Shafer, George Daniel, (1234)
Instructor in Physiology, 321 Melville-p

A. B., Indiana, 1900; A. M., Stanford, 1906; Ph. D., Cornell, 1908. Fellow In Entomology and Invertebrate Zoology, Cornell University, 1906–08; Research Assistant, Experiment Station, Michigan Agricultural College, 1908–14, Associate, 1914–17. At Stanford since 1918.

†Sharpe, Otis Allen, (123) Pacific 9377
Clinical Instructor in Surgery, 738 17th ave., SF-sf

B. S., California, 1912, M. S., 1913; M. D., Stanford, 1916. Instructor in Physiology and Biochemistry, University of California, 1913–14; Interne, San Francisco Hospital, 1916–17. At Stanford since 1917.

Shedd, Solon, (4)
Acting Associate Professor of Geology, 1037 High-p

A. B., Stanford, 1896, A. M., 1897, Ph. D., 1910.

†Shockley, William Hillman, (23) PA 339J
Lecturer in Mining and Metallurgy, 959 Waverley-p

B. S., Massachusetts Institute of Technology, 1875. Land Surveyor and Planter, Florida, 1876–77; Engineer, Hydraulic Mines, California, 1878–79; Superintendent and General Manager, Mt. Diablo Mine, Candelaria, Nevada, 1880–93; Superintendent W. Y. O. D. Mine, Grass Valley, 1893; Consulting Engineer in China, 1897–99; Examining Mines in Siberia, Australia, Korea, Texas, Peru, Sudan, Nevada, 1900–10; Studying Geology, University of Lausanne, Switzerland, 1910–11.

*Show, Arley Barthlow, (1) PA 865
Professor of European History, 446 Forest

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane, 1892. Pastor Congregational Church, Waco (Neb), 1885–87; Professor of History and English Literature, Doane College, 1887–92; Student, University of Leipzig, 1900–01; Lecturer on History of the Early Church, Pacific Theological Seminary, Berkeley, 1905–07. At Stanford since 1892.

†Sloan, William Henry, (124) PA 1954R2
Assistant Professor of Chemistry, Alta Mesa, Box 105-p

A. B., Stanford, 1903, A. M., 1904. Student, University of Leipzig, 1904–05; Assistant Chemist, San Francisco Board of Health, 1905–06. At Stanford 1903–04, and since 1906.

* Deceased, October 28, 1920.

†Slonaker, James Rollin, (123) PA 451
Assistant Professor of Physiology, 334 Kingsley-p

B. S., Wisconsin, 1893; Ph. D., Clark, 1896. Fellow in Biology, Clark University, 1893–96; with United States Fish Commission, Woods Hole (Mass.), Summer, 1895; Instructor in Zoology, Indiana University, 1896–99, Indiana University Biological Station, 1896–1900; Assistant Professor of Zoology, Indiana University, 1899–1901; Research Assistant in Neurology, University of Chicago, 1901–02, Associate in Neurology, 1902–03. At Stanford since 1903.

Smith, Bryant, (4)
Acting Assistant Professor of Law (Summer Quarter),

A. B., Guilford College; A. M., LL. B., Colorado.

†Smith, Everett Wallace, (123) PA 1041
Assistant Professor of English, 12 Alvarado

A. B., Stanford, 1899. At Stanford since 1910.

Smith, Hazel C. (Mrs.), (3)
Assistant Superintendent of Nurses, Lane Hospital, SF-sf

†Smith, James Perrin, (123) PA 1218W
Professor of Paleontology, 1335 Cowper-p

A. B., Wofford College, 1884; A. M., Vanderbilt, 1886; Ph. D., Göttingen, 1892; LL. D., Wofford College, 1916. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887–90; Assistant Geologist, U. S. Geological Survey, 1895–1906, Geologist since 1906. At Stanford since 1892.

†Smith, Stanley Astredo, (124) Redwood 285R
Assistant Professor of French, (Box 176) Redwood-r

A. B., Stanford, 1903, A. M., 1905. Assistant in Romanic Languages, Stanford University, 1903–04, Instructor, 1904–07; Student, Universities of Paris and Madrid, 1906–07; Instructor in French and Italian, University of Washington, 1907–11; Student, Harvard University, 1911–13, Instructor in Romance Languages, 1912–13; Professor of Romance Languages, Reed College, 1913–14. At Stanford 1903–07, and since 1914.

Snell, Elizabeth Burritt (Mrs.), (1234) PA 508R
Appointment Secretary, 551 University-p

A. B., Stanford, 1908. At Stanford since 1916.

†Snyder, John Otterbein, (123) PA 600R
Associate Professor of Zoology, 1345 Cowper

A. B., Stanford, 1897, A. M., 1899. Assistant, U. S. Fish Commission, 1897, 1899, 1904, 1915, 1916; Naturalist on U. S. S. "Albatross" engaged in deep sea investigations, 1902, 1906; Expert Ichthyologist, U. S. National Museum, 1914; Fisheries Expert, Fish and Game Commission of California, since 1919. At Stanford since 1897.

†Snyder, Edwin Reagan, (4)
Lecturer in Education (Summer Quarter), Kingscote

B. Ped., Colorado State Normal School, 1895; A. B., Stanford, 1905; Ph. D., Columbia, 1909. Research Scholar, Teachers' College, Columbia University, 1907–08, Fellow, 1908–09; Principal of Schools, Colorado, 1895–1900; Supervisor of Manual Training, Alameda, 1900–02; Supervisor of Manual Training, State Normal School, San Jose, 1902–07; Lecturer in Education, Stanford University, 1903–04; Professor of Education and Head of the Department of Manual and Domestic Arts, State Normal School, San Jose, 1909–11; Vice-President, State Normal School, and Assistant Superintendent of City Schools, Fresno, 1911–13; Superintendent of City Schools, Santa Barbara, California, 1913–14; State Commissioner of Vocational Education, since 1914.

†SOMERS, GEORGE BURBANK, (123) West 6193
Clinical Professor of Gynecology, Lane Hospital, SF-sf

A. B., Harvard, 1886; M. D., Cooper Medical College, 1888. Chief Surgeon, San Francisco Emergency Hospital, 1891–95; Adjunct to Chair of Gynecology, Cooper Medical College, 1889; Professor of Gynecology, 1901; Gynecologist to Lane Hospital, 1900–12. At Stanford since 1911.

†SPALDING, ALFRED BAKER, (123) Fillmore 826
Professor of Obstetrics and Gynecology, 2651 Green, SF-sf

A. B., Stanford, 1896; M. D., Columbia, 1900. House Surgeon, General Memorial Hospital, New York, 1900–01; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1901–02; Instructor in Obstetrics, University of California, 1902–05, Assistant Professor, 1905–09; Professor, 1909–12. At Stanford since 1912.

STANLEY, EDWARD JOHN, (123) PA 544W
Teaching Specialist in Mechanic Arts, 269 Hawthorne-p

Machinist with Pacific Iron Works, San Francisco, 1879, Blacksmith, 1880, Draughtsman, 1881, Pattern Maker, 1883–86; Third Assistant Engineer, Steamer "Alabama," 1882; Foreman Pattern Maker, Union Iron Works, San Francisco, 1886–1901, 1906. At Stanford since 1901.

STARKS, CHLOE LESLEY (Mrs.), (123) PA 812M
Assistant Professor of Education (Graphic Art), 1115 Ramona-p

At Stanford since 1899.

†STARKS, EDWIN CHAPIN, (123) PA 812M
Assistant Professor of Zoology, 1115 Ramona-p

Assistant in United States Bureau of Biological Survey, 1897–99; Curator of the Museum and Assistant Professor of Zoology, University of Washington, 1899–1900. At Stanford since 1900.

†STEBBINS, HORATIO WARD, (123) PA 316
Assistant Professor of Mechanical Engineering, 327 Addison-p

A. B., California, 1899; B. S., Massachusetts Institute of Technology, 1902. Assistant to Engineer of Tests, Southern Pacific Railroad Company, 1902–05; Engineer and Estimator, San Francisco Bridge Company, 1905–13. At Stanford since 1914.

†STEPHENSON, HENRY AUGUSTUS, (123) Sutter 3560
Assistant Clinical Professor of Obstetrics and Gynecology, 650 Bush, SF-sf

A. B., Randolph-Macon College, 1906; M. D., Johns Hopkins Medical School, 1910. Assistant Resident Obstetrician, Johns Hopkins Hospital, 1911–12, Resident Obstetrician, 1912–14; Assistant in Obstetrics, Johns Hopkins Medical School, 1911–12, Instructor, 1912–14. At Stanford since 1914.

STEVENS, BURT S., (123) (Medical Bldg., 1–4) Franklin 3636
Lecturer in Surgery, Bellevue Hotel, SF-sf

Ph. G., University of Buffalo, 1896; M. D., Northwestern University Medical School, 1908. Instructor in Surgery, Northwestern University Medical School, 1909–1912; Surgeon, Wesley Memorial Hospital, Chicago, 1909–12; Surgeon, People's Hospital, Chicago, 1910–12; Instructor in Bacteriology and Chemistry, Illinois Training School, 1908–09; Lecturer in Bacteriology, Etiology, and Hygiene, Wesley and Mercy Training Schools, 1909–12; Surgical Chief, San Francisco Polyclinic, 1919–20. Captain, M. R. C., U. S. A., October to December, 1918.

†STEVENS, WILLIAM EMERSON, (123) West 700
Lecturer on Urology, 1007 Gough, SF-sf

M. D., California, 1899. Chief of Genito-Urinary Department, Mount Zion Hospital and Mount Zion Clinics; Chief of Genito-Urinary Department and

Department of Urology in Women, San Francisco Polyclinic and Post Graduate School of Medicine; Genito-Urinary Surgeon, Bethlehem Shipbuilding Corporation (Ltd.) Hospital; Gynecological Urologist, San Francisco County Hospital.

STEWART, HERBERT LESLIE, (4)
Acting Professor of Philosophy (Summer Quarter), 25 Alvarado

M. A., Royal University of Ireland, 1905, Ph. D., 1907; M. A., Oxford, 1905. John Locke Scholar in Mental Philosophy, Oxford University, 1905; Lecturer in Moral Philosophy, Belfast University, 1909–13; Professor of Philosophy, Dalhousie University, since 1913.

†STIEGLITZ, JULIUS, (4)
Acting Professor of Chemistry (Summer Quarter), Stanford Union

A. M., Ph. D., University of Berlin, 1889; Hon. D. Sc., Clark, 1909; Ch. D., Pittsburgh, 1916. Docent in Chemistry, University of Chicago, 1892–93, Assistant, 1893–94, Instructor, 1894–97, Assistant Professor, 1897–1902, Associate Professor, 1902–05, Professor, since 1905.

STILLMAN, MINNA, (1234) PA 1048
Document Librarian, 2 Alvarado

A. B., Stanford, 1903. At Stanford since 1912.

†STILLMAN, STANLEY, (1234) West 1034
Professor of Surgery, 2336 Broadway, SF-sf

M. D., Cooper Medical College, 1889. Adjunct Professor of Surgery, Cooper Medical College, 1895–98, Professor of Surgery, 1898–1912; Assistant Visiting Surgeon, City and County Hospital, San Francisco, 1891–99, Visiting Surgeon, 1899–1912; Chief Surgeon, Lane Hospital, 1895–1912; Lieutenant Commander, U. S. N. R. F., 1917–19. At Stanford since 1909.

STOLTENBERG, CLARA S., (123) PA 199
Associate Professor of Physiology, 9 Salvatierra

A. B., Stanford, 1896, A. M., 1897. At Stanford since 1896.

†STOLZ, HERBERT ROWELL, (4)
Lecturer in Physical Education (Summer Quarter) Embarcadero

†STUART, HENRY WALDGRAVE, (124) PA 1069
Professor of Philosophy, 8 Alvarado

Ph. B., California, 1893; Ph. D., Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893–94; Fellow in Political Economy, University of Chicago, 1894–96; Instructor (pro tem.) in Economics and Psychology, Washington University, St. Louis, 1896–97; Teacher, Central School, Oakland (Cal.), 1897–98; Principal, Woodland (Cal.) H. S., 1898–99; Fellow in Philosophy, University of Chicago, 1899–1900; Instructor in Economics and History, Ripon College, 1900–01; Instructor in Philosophy, State University of Iowa, 1901–04; Acting Professor of Philosophy, Lake Forest College, 1904–05, Assistant Professor, 1905–07. At Stanford since 1907.

SUTLIFF, HELEN BINNINGER, (1234) PA 876
Chief Cataloguer, Library, 19 Salvatierra

A. B., Kansas, 1890. Head Cataloguer, University of Kansas Library, 1891–1905; Cataloguer in Columbia University Library, Summer, 1901. At Stanford since 1904.

†SWAIN, ROBERT ECKLES, (134) PA 247
Professor of Chemistry, 10 Cabrillo

A. B., Stanford, 1899; M. S., Yale, 1901, Ph. D., 1904. Student, Universities of Strassburg and Heidelberg, 1901–02, Yale University, 1909–10. At Stanford since 1898.

†Taff, Joseph Alexander, (1) PA 792 J
Lecturer in Geology, 628 Cowper-p

B. S., Texas, 1894. Fellow in Biology, University of Texas, 1893–94; Member Arkansas Geological Survey, 1888, Texas Geological Survey, 1888–94, United States Geological Survey, 1884–1909; Geologist, Southern Pacific Company, since 1909; Consulting Geologist, Associated Oil Company, since 1919; Chief Geologist, Pacific Oil Company, 1921.

†Tatlock, John S. P., (134) PA 1061M
Professor of English Philology, 5 Santa Ynez

A. B., Harvard, 1896, A. M., 1897, Ph. D., 1903. Student, Universities of Michigan, 1899–1901, Freiburg im Breisgau, 1904; Instructor in English, University of Michigan, 1897–1901, 1903–05, Assistant Professor, 1905–07, Junior Professor, 1907–12, Professor, 1912–15; Professor of English, University of Chicago, Summer Quarter, 1909, Dartmouth College, Summer Session, 1914. At Stanford since 1915.

†Terman, Lewis Madison, (1234) PA 1178
Professor of Education, 9 Dolores

A. B., Indiana, 1902, A. M., 1903; Ph. D., Clark University, 1905. Fellow in Psychology and Education, Clark University, 1903–05; Principal of High School, San Bernardino (Cal.), 1905–06; Head of Department of Child Study and Pedagogy, Los Angeles State Normal School, 1906–10; Instructor in Education, Indiana University, Summer Session, 1909, New York University, Summer Session, 1916, Columbia University, Summer Session, 1917; Major, Division of Psychology, Surgeon General's Office, Washington (D. C.), 1918. At Stanford since 1910.

Thomas, Earl Charles, (123) PA 632W
Assistant Professor of Civil Engineering, 635 Bryant-p

A. B., Stanford, 1914. Instructor in Railroad Engineering, A. E. F. University, Beaune, France, 1919. At Stanford since 1920.

†Tolman, Cyrus Fisher, Jr., (234) PA 1052R
Professor of Economic Geology, 6 Alvarado

B. S., Chicago, 1896. Fellow in Geology, University of Chicago, 1897–98; Consulting Economic Geologist, since 1898; Professor of Geology, University of Arizona, 1905–06, Professor of Geology and Mining, 1906–12; Territorial Geologist of Arizona, 1910–12. At Stanford since 1912.

Towne, Edward Bancroft, (1234) West 177
Instructor in Surgery, 2605 California, SF-sf

A. B., Harvard, 1906, M. D., 1913. House Officer and Assistant Resident Surgeon, Peter Bent Brigham Hospital, Boston, 1913–15; Honorary Medical Officer, Royal Army Medical Corps, France, 1915–16; Voluntary Assistant, Mayo Clinic, 1916–17; Assistant Resident Surgeon, Brigham Hospital, and Assistant in Surgery, Harvard Medical School; Lieutenant, Captain, and Major, Medical Corps, U. S. A., A. E. F., 1917–19. At Stanford since 1919.

†Townley, Sidney Dean, (123) PA 1016
Professor of Applied Mathematics, 33 Salvatierra

B. S., Wisconsin, 1890, M. S., 1892; D. Sc., Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890–91, Assistant in Astronomy and Mathematics, 1891–92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892–93; Instructor in Astronomy, University of Michigan, 1893–95, 1896–98; Student, Universities of Berlin and Munich, 1895–96; Instructor in Practical Astronomy, University of California, 1898–1903, Lecturer in Astronomy, 1904–07; Astronomer in charge of International Latitude Observatory, 1903–07. At Stanford since 1907.

TRACE, GERTRUDE MAY, (1234) SJ 4930W
Instructor in Psychology, 730 University, SJ-sj

A. B., Stanford, 1914. Student, University of Chicago, 1914–15, Stanford University, 1914, 1915, 1916–17. At Stanford since 1917.

†TREAT, PAYSON JACKSON, (124) PA 1128
Professor of History, 8 Dolores

A. B., Wesleyan, 1900; A. M., Columbia, 1903; Ph. D., Stanford, 1910. Instructor in History, Barnard School, New York City, 1900–03; Graduate Student, Stanford University, 1903–05; Research Student in Far East, 1906–07; Instructor in Government, Harvard University, 1908–09; Lecturer in Political Science, University of California, Second Semester, 1915–16. At Stanford since 1905.

TROTTER, REGINALD GEORGE, (123) PA 1006
Assistant Professor of English History, Cooksey Lane

A. B., Yale, 1911; A. M., Harvard, 1915. History Master, Thacher School, Ojai (Cal.), 1911–14; Parker Traveling Fellow in Canadian History, Harvard University, 1916–17; Austin Teaching Fellow in History, 1917–18, Instructor in History, 1918–19; Lecturer in European History, Boston University, April–June, 1918; Lecturer in Charge of War Issues Course, Northeastern College, Fall Term, 1918; Eric Dennis Lecturer in Political Science, Dalhousie University, March, 1919. At Stanford since 1919.

TRUE, HELEN ELLA, (1234) PA 538R
Secretary to the President, 682 University-p

A. B., Mt. Holyoke, 1905. At Stanford since 1914.

[†TUPPER, ROLAND BEATTY, Fillmore 877
Assistant Clinical Professor of Medicine, 2720 Pierce, SF-sf]

M. D., Cooper Medical College, 1910. Assistant Visiting Physician, St. Luke's Hospital, since 1912; Assistant in Pediatrics, Cooper Medical College, 1912; Assistant Visiting Physician, San Francisco Hospital, since 1912; on Diagnostic Section, St. Luke's Hospital Clinical Club, since 1915; with U. S. N., Base Hospital No. 2, 1918. At Stanford since 1912.

UELAND, EDITH, (4)
Acting Instructor in Physical Education (Summer Quarter), Madroño

VAN WAGENEN, GERTRUDE, (4)
Acting Instructor in Zoology, Pacific Grove-pg

A. B., Iowa, 1913, Ph. D., 1920. Research Assistant in Zoology, State University of Iowa, 1914–20; Research Student, Bermuda Biological Station of Harvard University, 1916–18; Curator in Charge of Actineans and Corals, Barbadoes-Antigua Expedition of the University of Iowa, 1918.

†VERNIER, CHESTER GARFIELD, (123) PA 254
Professor of Law, 951 Bryant-p

A. B., Butler College, 1903; J. D., Chicago, 1907. Graduate Scholar, University of Chicago, 1904–05; Instructor in Law, Indiana University, 1907–08; Professor of Law, University of Nebraska, 1908–10; Indiana University, 1909–11, University of Illinois, 1911–16; Lecturer in Law, University of Chicago, Summer Quarter, 1911, 1912, University of Michigan, Summer Session, 1914, At Stanford since 1916.

†VESTAL, ARTHUR GIBSON, (123)
Acting Assistant Professor of Biology, 301 Pope

A. B., Illinois, 1911; A. M., Colorado, 1913; Ph. D., Chicago, 1915. Instructor in Biology, University of Colorado, 1911–14, and Summer Sessions, 1919, 1920; Professor of Biological Sciences, Eastern Illinois State Normal School, 1915–20.

WARREN, BERTHA HENZEL, (Mrs.) (1234)
Secretary to Dean of Medical School, 2294 Bush, SF-sf
A. B., Stanford, 1906. At Stanford since 1918.

†WEBSTER, DAVID LOCKE, (123) PA 331M
Professor of Physics, County Road
A. B., Harvard, 1910, Ph. D., 1913. Assistant in Mathematics, Harvard University, 1909–10, Instructor, 1910–14, Assistant in Physics, 1911–15, Instructor, 1915–17; Assistant Professor of Physics, University of Michigan, 1917; 1st Lieut., Science and Research Division, A. S. S. R. C., later B. A. P., 1917–18, Captain, 1918; Assistant Professor of Physics, Massachusetts Institute of Technology, 1919–20. At Stanford since 1920.

†WELTY, CULLEN FRANCIS, (123) Pacific 1874
Lecturer in Otology, Rhinology, and Laryngology,
18 Presidio Terrace, SF-sf
M. D., Pennsylvania, 1890. Volunteer Assistant, Ear Clinic, University of Vienna, and Private Assistant Docent Doctor Hajek, Vienna, 1901–03; Ear, Nose, and Throat Surgeon, San Francisco Polyclinic and City and County Hospital, since 1903.

[†WEST, VICTOR J., PA 291J
Professor of Political Science, 376 Addison-p]
Ph. B., Chicago, 1905. Instructor in English and Civics, Bradley Polytechnic Institute, 1905–06; Fellow in Political Science, University of Chicago, 1908–10, Assistant in Political Science, 1910; Instructor in Politics, Northwestern University, 1910–13; Assistant Chief of Service, Illinois Progressive Service Board, 1913; Instructor in Political Science, University of California, Summer Session, 1915; Special Investigator, U. S. Bureau of Efficiency, 1918. At Stanford since 1913.

†WEYMOUTH, FRANK WALTER, (234)
Assistant Professor of Physiology, 3 Salvatierra
A. B., Stanford, 1909, A. M., 1911. Assistant in Physiology, Johns Hopkins University, 1912–13. At Stanford since 1910.

WHEELER, RAYMOND HOLDER, (4) PA 1025
Acting Assistant Professor of Education (Summer Quarter),
Madroño
A. B., Clark, 1912, A. M., 1913, Ph. D., 1915. Scholar and Fellow in Experimental Psychology, Clark University, 1912–15; Professor of Psychology, University of Oregon.

†WHITAKER, ALBERT CONSER, (123) PA 1081J
Professor of Economics, 9 Alvarado
A. B., Stanford, 1899; Ph. D., Columbia, 1904. Scholar in Economics, Columbia University, 1899–1900, Fellow, 1900–01; Student, University of Berlin, 1901; Lecturer in Economics and Social Science, Columbia University, 1906–07; Lecturer in Economics, University of California, Summer Sessions, 1906, 1911; Acting Professor of Economics, University of Chicago, second half of 1911–12 and 1912–13. At Stanford since 1902.

†WHITTIER, CLARKE BUTLER, (123) Menlo Park 1243R
Professor of Law, Menlo Heights
A. B., Stanford, 1893; LL. B., Harvard, 1896. Attorney at Law, Los Angeles, 1895–96; Student, Stanford University, 1896–97, Instructor in Law, 1897–99, Assistant Professor, 1899–1900, Associate Professor, 1900–02; Professor of Law, University of Chicago, 1902–14. At Stanford 1897–1902, and since 1915.

†WILBUR, RAY LYMAN, (123) PA 46
President of the University, Lagunita Knoll

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1899; LL. D., California, 1919, Arizona, 1919. Assistant in Physiology, Stanford University, 1894-96, Instructor, 1896–97, Assistant Professor, 1900–03; Lecturer and Demonstrator in Physiology, Cooper Medical College, 1899–1900; Professor of Medicine and Dean of the Stanford Medical School, 1909–16. At Stanford 1894–97, 1900–03, and since 1909.

†WILDMAN, MURRAY SHIPLEY, (134) PA 1179
Professor of Economics, 37 Salvatierra

A. B., Earlham, 1893; Ph. D., Chicago, 1904. Professor of History and Economics, Central College (Mo.), 1904–05; Instructor in Economics, University of Missouri, 1905–06; Assistant Professor, 1906–08; Acting Assistant Professor, University of Chicago, Summer Quarter, 1909; Assistant Professor of Economics and Commerce, Northwestern University, 1909–11, Professor, 1911–12. At Stanford since 1912.

†WILLIAMS, J. HAROLD, (4) PA 1045
Acting Assistant Professor of Education (Summer Quarter), 5 Cabrillo

A. B., Stanford, 1913, A. M., 1914, Ph. D., 1916. Director of Research, Whittier State School, since 1915.

†WILLIS, BAILEY, (23) 11118
Professor of Geology, 5 Lasuen

E. M., Columbia School of Mines, 1878, C. E., 1879; Hon. Ph. D., University of Berlin, 1910. Special Expert, Iron Ores, Tenth Census, 1879–81; Geologist, Northern Transcontinental Survey, exploration for Northern Pacific and Allied Companies, 1881–84; Geologist, United States Geological Survey, in charge Appalachian Division, New York to Alabama, Cascade Range and Puget Sound Division, Washington, and Editor Geologic Atlas of the United States, 1884–1915; Assistant to Director, United States Geological Survey, 1897–1902; Geologist in charge of Division of Areal and Stratigraphic Geology, 1900–06; Geologist engaged in Geological explorations in China under auspices of Carnegie Institution, 1903–04; Lecturer on Geology, Johns Hopkins University, 1895–1902, University of Chicago, 1909; Consulting Geologist to Minister of Public Works, Argentina, 1911–14; member, National Academy of Sciences, 1920. At Stanford since 1915.

†WING, CHARLES BENJAMIN, (123) PA 445W
Professor of Structural Engineering, 345 Lincoln

C. E., Cornell, 1886. Fellow in Civil Engineering, Cornell University, 1886–87, Instructor, 1887–90, Assistant Professor, 1890–91; Engineer, Pompton (N. J.) Powder Co., 1887, Phoenix Powder Co., Farmingdale (N. J.), 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889–90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891–92. At Stanford since 1892.

†WOLFSOHN, JULIAN MAST, (123) Fillmore 2532
Assistant Clinical Professor of Medicine (Neurology), 2961 Pacific, SF-sf

A. B., University of California, 1905, M. S., 1907; M. D., Johns Hopkins University Medical School, 1911. Research Assistant, Herzstein Laboratory, University of California, 1906–07; Medical House Officer, Johns Hopkins Hospital, 1911–12; Captain, M. R. C., U. S. A., 1917–19. At Stanford since 1913.

†WOOLSEY, CHESTER HOWARD, (123) Fillmore 941
Clinical Instructor in Surgery (Genito-Urinary), 870 Market, SF-sf

B. S., California, 1895, M. D., 1901. Assistant to Chair of Clinical Medicine, University of California, 1902–06; State Bacteriologist, California, 1903–04; Assistant to Chair of Genito-Urinary Surgery, Cooper Medical College, 1911–12; Surgeon in Reserve, U. S. Public Health Service. At Stanford since 1912.

WYCKOFF, HARRY ALPHONSO, (123) Oakland 7902
Instructor in Medicine, 417 Oakland, Oakland-o

A. B., Stanford, 1907, M. D., 1916. Head of Department of Physical Education, Los Angeles High School, 1907–12; Bacteriologist, San Francisco Board of Health Laboratories, 1917; Pathologist, Napa State Hospital, 1918. At Stanford since 1919.

†YERINGTON, HENRY HERBERT, (123) Fillmore 476
Assistant Professor of Medicine (Pediatrics), 2989 Jackson, SF-sf

M. D., Columbia University, 1908. Student, Stanford University, 1900–04, Bellevue Hospital, New York, 1909–10; House Physician, Pediatric Service, Bellevue Hospital, 1909–10; Instructor in Pediatrics, Cooper Medical College, 1910–11; Visiting Pediatrician, San Francisco Hospital, Assistant Visiting Staff, Children's Hospital, San Francisco. At Stanford since 1913.

YOUNG, STEWART WOODFORD, (123)
Professor of Physical Chemistry, Menlo Heights

B. S., Cornell, 1890. Assistant in Chemistry, Cornell University, 1890–91; Instructor in Chemistry, Swarthmore College, 1891–93. At Stanford since 1893.

†ZOBEL, ALFRED JACOB, (123) Pacific 119
Lecturer on Proctology, 352 Lake, SF-sf

M. D., Cooper Medical College, 1898. Assistant Prosector, Anatomy, Department, Cooper Medical Department, 1899–1900, Assistant Medical Clinic, 1899; Assistant Medical Clinic, San Francisco Polyclinic, 1901–03, Associate Professor in Medicine, 1904–05, Associate Professor of Proctology, 1906–09, Chief of Department of Rectal Surgery, since 1909; Consulting Rectal Surgeon, Mt. Zion Hospital, 1917; Visiting Rectal Surgeon, San Francisco Hospital, since 1908. At Stanford since 1918.

WOOD, BEN, (4)
Acting Professor of Education (Summer Quarter),

†WOOD, WILL CHRISTOPHER, (4) PA 860
Lecturer in Education (Summer Quarter), Kingscote

A. M. (pro merito), University of Southern California, 1919. Student, Stanford University, 1900–01, University of California, 1906–09, University of Michigan, Summer Session, 1913; Principal of Schools, Fairfield (Cal.), 1901–06; Principal of Wilson School, Alameda, 1906–09; Superintendent of City Schools, Alameda, 1909–14; State Commissioner of Secondary Schools, 1914–19; State Superintendent of Public Instruction of California, since 1919; Instructor in Secondary Education, Teachers' College, Columbia University, Summer Session, 1917; President of the National Council of State Departments of Education, 1919–20.

ASSISTANTS IN INSTRUCTION

Apgar, Genevieve, English, (1234) 1 Salvatierra
A. B., Chicago, 1910.

†Ashley, Rea, Surgery, (1234) Lane Hospital, SF-sf

Barnes, Wallace Harold, Medicine, (1234) 741 Phelan Bldg., SF-sf
M. D., Jefferson Medical College, 1918.

Bernard, Dorothy Eloise, Chemistry, (123) 146 Roble
A. B., Stanford, 1920.

Armitstead, Reo B., Anatomy, (3) 326 Encina

Bonner, Willard H., English, (3) 714 University ave., SJ-sj

Bunds, Clifford Courtney, Chemistry, (123) 324 Encina
A. B., Stanford, 1920.

Campbell, Helen D., English, (3) 358 Roble

Campbell, John Lockhart, Clinic Dentist, (1234) 391 Sutter, SF-sf

Classen, Willard J., Geology, (4) Fillmore-f

Clay, Harry E., Obstetrics and Gynecology, (1234) 2710 Baker, SF-sf
M. D., Rush Medical College, 1904. House Surgeon, Passavant Memorial Hospital, 1904–05; Assistant Professor of Surgery, Willamette University (Ore.), 1911–12; Chair of Gynecology, Willamette University, 1912–15; Member, Oregon State Board of Health, 1916, until entry into service; Captain, U. S. A., 1917, Major, 1918.

Condit, John Christy, Medicine, (1234) 5557 Lawton, Oakland-o
A. B., Parsons College, 1892; M. D., Cooper Medical College, 1904.

Corby, Grant W., Geology, (4) Fillmore-f

Curtice, Aubrey A., Geology, (4) Fillmore-f

Dobbel, Charles A., Geology, (4) Fillmore-f

Dudley, Hubert W., Medicine, (1234) 231 Bay View, San Rafael-sr
M. D., Jefferson Medical College, 1888; M. D., Central College of Physicians and Surgeons, 1899. House Surgeon, New York Aural and Ophthalmic Hospital, 1900–01; Clinical Assistant and Special Student, Massachusetts General Hospital, 1910–11.

Eiskamp, Marguerite, Chemistry, (4) 3039 24th, SF-sf

Gilson, Dorothy, Latin, (123) 467 Forest-p
A. B., California, 1918.

†Glaeser, W. Edward, Medicine, (1234) 3039 24th st., SF-sf
M. D., Hahnemann (U. C.), 1918. Interne, San Francisco Hospital, 1917–18, Resident Physician, Tuberculosis Department, since 1918.

Gottbrath, Norbert J., Medicine (Neurology), (1234), 1145 Flood Bldg., SF-sf
B. S., St. Mary's Institute, Dayton (Ohio), 1898; M. D., Georgetown University, 1912. Clinical Assistant, Neurological Institute, New York City, 1914–15; Attending Physician and Instructor, Vanderbilt Clinic, 1914–16.

Hackley, Sadie Gilmore (Mrs.), Mathematics, (12) 807 Waverley-p
A. B., Stanford, 1907.

Haist, Helen Eugenia, Romanic Languages, (123) 219 Roble
A. B., Stanford, 1920.

Hall, Helene Marie, Romanic Languages, (123) Sigma Kappa
A. B., Stanford, 1920.

Hamlyn, T., Geology, (4) Fillmore-f

Hansen, Hazel Dorothy, Greek, (1234) 402 Tilton, San Mateo-sm
A. B., Stanford, 1920.

Hedrick, Marion L., English, (34) 912 Scott, Santa Clara-sc

Hobdy, W. C., Surgery, (34)

Hoyt, Frank Clark, Physics, (123) Cooksey Lane
B. S., Massachusetts Institute of Technology, 1918, M. S., 1920.

Jacobsen, Peter N., Women's Clinic (Obstetrics and Gynecology), (1234) 479 Cheney, Oakland-o

B. S., Healdsburg College, 1901; M. D., Cooper Medical College, 1905. Interne, French Hospital, San Francisco, 1903–06; Student in Vienna, 1912–13.

Kinne, Elmer F., Eye Clinic, (34)

Kinslow, Frank A., Medicine, (1234) 2400 Van Ness, SF-sf

M. D., Cooper Medical College, 1906. Interne, St. Joseph's Hospital, 1906–07; First Lieutenant, M. C., U. S. A., 1918–19.

†Kirk, Josiah H., Surgery, (Ear, Nose, Throat), (1234) 251 Embarcadero-p

M. D., Cooper Medical College, 1906.

†Kroll, Frederick Walter, Medicine, (1234) 1238 Washington, SF-sf

M. D., Cooper Medical College, 1912. Assistant, Obstetrics and Gynecology, 1914, Instructor, Materia Medica, Lane Hospital, 1913–14; Captain, M. R. C., U. S. A., 1916–18.

†Lanz, Henry, Slavic, (1234) 918 Cowper-p

[Leach, Charles Nelson, Medicine (Dermatology), (123) San Francisco]

A. B., Stanford, 1909, M. D., 1913.

Lee, Ethel, Romanic Languages, (123) 970 University-p

A. B., Stanford, 1919.

†von der Lieth, Harold Otto, Surgery, (1234) 870 Market, SF-sf

Ph. G., California, 1893; M. D., Cooper Medical College, 1897. Interne, German Hospital, San Francisco, 1898; Assistant Police Surgeon, San Francisco, 1898–1901; Volunteer Assistant, Berlin and Vienna, 1902–03; Instructor, Operative Gynecology, Cooper Medical College, 1904–06; in Charge Out-Patient Department, German Hospital, 1906–13; Graduate Work, Vienna and Berlin, 1914.

Manners, Verda, English, (23) Sigma Kappa

A. B., Stanford, 1920.

McDermoth, Alanson W., Chemistry, (4) Encina

Mackenzie, Andrew N., Geology, (4) Fillmore-f

McPherson, James D., Geology, (4) Fillmore-f

Mentzer, Mary, Medicine, (34)

Messenger, Ivan Rush, Romanic Languages, (1234) 558 Forest-p

A. B., Stanford, 1920.

Michelson, Lewis, Obstetrics and Gynecology, (1234) 1562 Vallejo, SF-sf

M. D., Cooper Medical College, 1907. Student, Vienna, 1910–11; Special Worker, Brady Urological Institute, Johns Hopkins University, 1916–17; Director of Bureau of Social Hygiene, California State Board of Health, since 1918. At Stanford since 1917.

Moore, Harold Staats, Surgery, (1234) 516 Sutter, SF-sf

M. D., Medical College of Indiana, Purdue University, 1898. Assistant Surgeon, U. S. A., 1910–11; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1910.

†Moore, Leland O. W., Women's Clinic, (Obstetrics and Gynecology), (1) 453 Clement, SF-sf

†Munger, Arthur Lee, Medicine, (1234) 2530 Broadway, SF-sf
A. B., Stanford, 1910, M. D., 1913.

Newland, Harvey, Chemistry, (3) 14 Lasuen

Palmer, Humphrey P., Medicine, (1234) 5703 College, Oakland-o

Paul, Esther L. (Mrs.), English, (1) 515 Lytton-p

Perry, Edna Elizabeth, Physiology, (123) Kingscote
B. S., Simmons, 1914; A. M., Stanford, 1920.

Peters, Gertrude Marian, Romanic Languages, (123) 208 Roble
A. B., Stanford, 1920.

Peterson, P. Victor, Chemistry, (234) 601 Channing-p
A. B., Iowa State Teachers College, 1917.

Pettit, Albert Victor, Medicine (Obstetrics and Gynecology), (1234) Lane Hospital, SF-sf
A. B., Stanford, 1915, M. D., 1919.

Price, Merton James, Surgery (Ear, Nose, Throat), (1234) 1588 Fell, SF-sf
A. B., Stanford, 1913, M. D., 1916.

Pruett, Harry Jeroam, Medicine (Skin Clinic), (1234) Hotel Normandie, SF-sf
A. B., Stanford, 1912, M. D., 1917. Interne, San Francisco Hospital, 1916–18; Captain, M. C., U. S. A., 1918–19.

Roberts, Perry B., Jr., Geology, (4) Fillmore-f

Rooney, Henry T., Medicine, (34)

Sappington, Clarence Olds, Women's Clinic, (1234) 980 Bush, SF-sf
A. B., Whitman College, 1911; M. D., Stanford, 1918. Interne, San Francisco Hospital, 1918; Assistant Resident Physician, Sacramento County Hospital, 1918–19; Assistant Resident Physician, San Quentin State Prison, 1919.

Schussler, Herman, Jr., Medicine (Children's Clinic), (234) 1800 Franklin, SF-sf

Seay, Claire Soulé (Mrs.), English, (23) 256 Kellogg-p
A. B., Stanford, 1905.

Smith, Harrison Painter, Chemistry, (23) 428 Encina
A. B., Stanford, 1920.

Smith, Jessie Edna, Romanic Languages, (123) 555 Lytton-p

Spencer, Lawrence M., Geology, (4) Fillmore-f

Spiro, Harry, Medicine, (1234) 516 Sutter, SF-sf
Ph. G., California, 1893; M. D., Cooper Medical College, 1904. Instructor in Pharmacology, Cooper Medical College, 1905–07.

†Sponsler, Olenus Lee, Physiology, (1234) 677 Melville-p
A. B., Michigan, 1910; A. M., Nebraska, 1912.

Stauf, Ida, Romanic Languages, (123) 515 Lytton-p
A. B., Stanford, 1910, A. M., 1912.

†Strickler, John Philip, Surgery, (1234) Flood Bldg., SF-sf
A. B., Stanford, 1913, M. D., 1916. First Lieutenant, M. C., U. S. A., 1918–19.

Templeton, Robert L., Aquatics, (4)

Titus, Charles Hickman, Economics, (1234) 226 Encina
A. B., Stanford, 1920.

Tuckey, Harry A., Consulting Dentist, (234) (S. F. Hospital) 209 Post, SF-sf

Van Clief, Harold M., Geology, (4) Fillmore-f

Weller, John Parsons, Romanic Languages, (123) 535 Encina
A. B., Stanford, 1920.

Winsor, Lucy Burton, Economics, (24) 1 Salvatierra
A. B., Vassar, 1919.

Wolters, Sophia Juliane, Germanic Languages, (123) Menlo Park-mp
A. B., Stanford, 1902.

Woodbridge, Elizabeth Dana, Romanic Languages, (123) 7 Alvarado
A. B., Vassar, 1907; A. M., Stanford, 1918.

†Wright, Frederick Leven, Surgery, (1234) 1487 Sacramento, SF-sf

TECHNICAL ASSISTANTS

Banham, F. D., Mechanician, Mechanician Shop, (1234) 425 Waverley-p

Barrett, Frank, Anatomy, (1234) 642 High-p

Bartlett, Emily, Anatomy, (1234) 1 Salvatierra

Bell, May Knight (Mrs.), Secretary, Entomology, (1234) 532 Homer-p

†Borrow, Sidney W., Physics, (1234) 1112 High-p

Boulware, Edna, Secretary, Chemistry, (1234) 170 Bryant-p

†Bruce, Walter Johnson, Chemistry, (1234) 327 Webster-p

Burk, Georgina M., Secretary, Roble Gymnasium, (1234) Kingscote

Curtis, Wilmetta, Secretary, Mining, (123) 567 Lincoln

Edwards, Muriel, Education, (4) Roble

Evans, Susan Le Count (Mrs.), Librarian, Education, (1234) 555 Waverley-p

Ferris, Roxana Stinchfield (Mrs.), Botany, (1234) 667 Melville

Hill, Clara E. (Mrs.), Physics, (234) 551 University-p

Huskey, Anne K. (Mrs.), Secretary, Civil Engineering, (123) 1376 Emerson-p

McDermoth, Nan A. (Mrs.), Secretary, Publicity, (123) 767 Everett-p

McInnis, Peter, Custodian, Encina Gymnasium, (1234) Mayfield-m

McKendry, Marion, Secretary, Law, (1234) Kingscote

Marx, Eleanor, Secretary, Military Training, (234) 356 Lincoln-p
A. B., Stanford, 1919.

Murray, Katherine, Secretary, Psychology (234) 1011 Fulton-p

Oldroyd, Ida S. (Mrs.), Curator, Geology, (123) 10 Alvarado

†Oldroyd, Thomas S., Assistant Curator, Geology, (123) 10 Alvarado

†Scott, Thomas Benjamin, Storekeeper, Chemistry, (1234) Mayfield-m

†Snow, Frank Jotham, Chemistry, (1234) 321 Lytton-p

Stuart, Burton, Physics, (1234) Mayfield-m

Tanner, Hilda V. (Mrs.), Secretary, Mining, (4)

Tyler, Rose T. (Mrs.), Secretary, History, (1234) 336 Everett

†Uhlman, Walter, Engineer, Mechanical Engineering, (1234) 230 Emerson-p

Weeks, Pearl M., Physics, (4)
A. B., Stanford, 1916, A. M., 1918.

LIBRARY STAFF

Clark, George Thomas, Librarian.

Hadden, Elizabeth, Chief of Order Department.

Hays, Alice Newman, Reference Librarian.

Ophüls, Louise, Medical Librarian, Lane Medical Library.

†Park, Charles V., Assistant Librarian.

Stillman, Minna, Document Librarian.

Sutliff, Helen Binninger, Chief Cataloguer.

Almond, Nina, Cataloguer, (1234) 2 Lasuen

Bickham, Edith, Cataloguer, (4) 481 Lytton-p

Boynton, Edith L. (Mrs.), Assistant, Serial Department, (3) 847 Bryant-p

Cook, Edith May, Assistant, Order Department, (1234) Mountain View-mv

Craig, Florence M., Cataloguer, (1234) Redwood City-rc

Crandall, H. Ruth, Assistant, Loan Desk, (34) 737 Waverley-p

Crutcher, Ruth Cary, Secretary, (23) 531 Cowper-p

Dresel, Johanna, Assistant, Lane Medical, (1234) 1050 Eddy, SF-sf

Gale, Helen Avery, Serial Department, (1234) 940 Waverley-p

Hyde, Lillian, Assistant, Reference Department, (1234) 334 Lincoln-p
A. B., Stanford, 1903.

Marx, Eleanor, Secretary, (1) 356 Lincoln-p

Meers, Edith G., Assistant, Serial Department, (1234) 1710 Waverley-p

Owens, William, (34) 156 Hamilton-p

Potter, Margaret L., Cataloguer, (1234) 1 Salvatierra

Secker, Pearl, Cataloguer, (1234) 437 Kipling-p
A. B., Stanford, 1918.

Stillson, Grace Elizabeth, Cataloguer, (1234) 451 Ruthven-p
A. B., Stanford, 1915.

Todd, Hannah Lilian, Bindery, (1234) 336 Everett-p

Wickes, Florence L., Cataloguer, Lane Medical, (1234) 519 Webster, SF-sf

Wilson, Hallie, Cataloguer, Lane Medical, (1234) 2105 California, SF-sf

ASSISTANTS IN ADMINISTRATION

OFFICE OF THE PRESIDENT

Cannon, Violet (Mrs.), Chief Assistant, (1234) Appointment Secretary's Office, 446 Ruthven-p

Fordyce, Elizabeth, Secretary, Lower Division Committee, (1234) Kingscote
B. S., Mills College, 1916.

Gardner, Evelyn N., Secretary to Dean of men, (1) 331 Lincoln-p

Melsome, Dorothy, Stenographer, (1234) Appointment Secretary's Office, Los Altos-la

Morris, Ruth M., Stenographer, (4)

Nevin, Shirley D., Assistant to Alumni Secretary, (3) 804 Bryant-p

Perry, Frances, Secretary to Dean of Women, (1234) Kingscote
A. B., Radcliffe, 1911.

Puhara, Alice Holmes (Mrs.), Stenographer, (234) Appointment Secretary's Office, Los Altos-la

Ramsey, Agnes Craig (Mrs.), Mimeographer, (1234) 20 Lasuen

Seaman, Olive (Mrs.), Stenographer to Appointment Secretary, (1234) 25 Salvatierra

Stokes, Blanche, Secretary to Alumni Secretary, (1234) 243 Cowper-p

Townley, Isabel, Departmental Secretary, (34) 33 Salvatierra

Townley, Lucile, Secretary to Dean of Men, (234) 33 Salvatierra
A. B., Stanford, 1918.

OFFICE OF THE REGISTRAR

Bentley, Ruth Mary, (14) 635 Homer-p
Brand, Elizabeth Morgan, (1234) 505 Embarcadero-p
Nagel, Laura Ingeborg, (1234) Los Altos-la
A. B., Stanford, 1904, A. M., 1905.
Peterson, Blanche, (34) 420 Oregon-p
Remele, Miriam Frances, (1234) 1 Salvatierra

OFFICE OF THE COMPTROLLER

†Allen, Everett A., Foreman Plumber, (1234) Stanford Park
Barker, Nellie H. (Mrs.), Stenographer, (1234) 633 Hamilton-p
Bell, Georgia, Cashier, (1234) 426 Ramona-p
de Bonnet, Leslie, Foreman, Composing Room, (34) Burlingame
†Borsdamm, John, Foreman of Bindery, (1234) 1729 Emerson-p
Church, Vivienne, Clerk, University Press, (1234) 262 Hawthorne-p
†Fisher, E. T., Head Bookkeeper, (1234) 550 Addison-p
†Frehe, Fred W., Foreman of Outside Properties, (1234) Stanford University
Gardiner, Gertrude, Matron, Roble Hall, (1234) Roble
†Hackenburger, William, Yard Office, (1234) Stanford University
Hall, Elsie, Private Exchange Operator, (12) 645 Lytton-p
Hay, Katherine, Stenographer, (23) 744 Waverley-p
Henderson, Jas. Ralph, Custodian, Encina and Sequoia Halls, (1234) 3 Sequoia
Ingraham, Eleanor R., Proofreader, (1234) Los Altos-la
John, Gertrude, Clerk, (1234) 904 Cowper-p
†McDonnell, J. W., Foreman Electrician, (1234) 618 Fulton-p
Malarkey, Edith (Mrs.), Private Exchange Operator, (4) 636 Gilman-p
Martin, C. J. (Mrs.), Proofreader, (34) Menlo Park
Matheson, Margaret M., Bookkeeper, (1234) 618 Channing-p
Meyrick, Geraldine, Stenographer, (4) 356 Addison-p
†Nyquist, I. A., Foreman of Grounds, (1234) Campus
Perham, Don DeBlois, Private Exchange Operator, (234) 335 Melville-p
Price, Verona, Secretary to Purchasing Agent, (1234) 602 Webster-p
A. B., Stanford, 1918.
Ross, Chester, Bookkeeper, (1234) Stanford University

†Schilling, John C., Foreman Carpenter, (1234) 730 Bryant-p
†Slack, Ellard L., Storekeeper, Lane Hospital, (1234) Larkspur
†Smith, C. B., Foreman Pressroom, (1234) 108 Melville-p
†Smith, George B., Foreman Painter, (1234) 253 Homer-p
Smith, Gladys B. (Mrs.), Bookkeeper, (1234) Stanford University
Stone, Charles F., Yard Clerk, (234)
†Thomas, Donald R., Bookkeeper, (4) 656 Bryant-p
Torrence, Edith (Mrs.), Private Exchange Operator, (3) 630 Bryant-p
†Waterman, Edward H., Chief Engineer, (1234) 567 Lytton-p
Widman, Fred, Purchasing Agent and Storekeeper, (1234) Stanford University

OFFICE OF THE TREASURER

Blodgett, David P., Chief Clerk, (1234) 556 Verona, Oakland-o
Frost, Maude L., Stenographer, (1234) 701 Post, San Francisco-sf

BOARD OF ATHLETIC CONTROL

Vickery, William K., Accountant, (1234) 381 Lincoln-p

ORGANIZATION

Foundation

STANFORD UNIVERSITY was established under an Act of the Legislature (approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

Nature, Object, and Purposes of the University

"We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant," etc.

"And that the trust hereby created may be executed according to the wishes of the grantors and each of them, they do hereby designate the Nature, Object, and Purposes of the Institution hereby founded, to be:

"Its nature, that of a University, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories, and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

"Its object, to qualify students for personal success and direct usefulness in life;

"And its purpose, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

Name of the University

"Since the idea of establishing an institution of this kind for the benefit of mankind came directly and largely from our son and only child, Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

Management and Control of the University

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By the Amending Act of May 31, 1899, the number of trustees is reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies.

Powers and Duties of the Trustees

"The Trustees shall have power and it shall be their duty:

"To appoint a President of the University, who shall not be one of their number, and to remove him at will.

"To fix the salaries of the President, Professors, and Teachers, and to fix them at such rates as will secure to the University the services of men of the very highest attainments.

"To establish and maintain at such University an educational system which will, if followed, fit the graduate for some useful pursuit, and to this end to cause the pupils, as early as may be, to declare the particular calling which in life they may desire to pursue. . . .

"To prohibit sectarian instruction, but to have taught in the University the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man.

"To have taught in the University the right and advantages of association and coöperation.

"To afford equal facilities and give equal advantages in the University to both sexes.

"The Board of Trustees shall annually report all their proceedings to the person who for the time being shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operation for the preceding year, and with a statement of the financial affairs of the institution."

Powers and Duties of the President

"It shall be the duty of the Trustees to give to the President of the University the following powers:

"To prescribe the duties of the professors and teachers; to remove professors and teachers at will; to prescribe and enforce the course of study and the mode and manner of teaching; such other powers as will enable him to control the educational part of the University to such an extent that he may justly be held responsible for the course of study therein and for the good conduct and capacity of the professors and teachers."

Amendments to the Founding Grant

A clause in the Founding Grant reserves to the grantors the right to alter, amend, or modify the terms and conditions of the grant in important particulars. Under this provision amendments were made by Mrs. Stanford June 1, 1897; May 31, 1899; March 28, 1902; October 3, 1902; June 1, 1903. These amendments were concerned mainly with matters of detail, but provided also "that the number of women attending the University as students shall at no time ever exceed five hundred."

An Amendment to the Constitution of the State of California, adopted November 6, 1900, "permitted, approved, and confirmed all the trusts, estates, terms, and conditions" of the Founding Grant and of all the deeds, conveyances, and other instruments made and delivered before that date, and authorized the Legislature, under certain conditions, to exempt the property of the University from taxation. Article 13 of the State Constitution, as amended November 3, 1914, exempts from taxation the buildings, grounds (not exceeding one hundred acres), equipment, securities, and income, used exclusively for educational purposes, of any educational institution of collegiate grade not conducted for profit.

The University Faculty

"The Trustees shall constitute the President and professors the faculty of the University, and shall prescribe their powers and duties as such."

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty

is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, the academic secretary, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the President, vice-president, registrar, academic secretary, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Standing Academic Committees of the Council, with the exception of the Graduate Study Committee, which is elected by the Council.

The Standing Administrative Committees of the Council are appointed by the President.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the President of the University, and the Academic Council. The executive head of the Department Faculty is designated annually by the President with the approval of the Advisory Board and of the Board of Trustees.

Departments

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) English, Germanic Languages, Greek, Latin, Romanic Languages; (II) Anatomy, Bacteriology and Experimental Pathology, Botany, Medicine, Physiology, Zoology; (III) Chemistry, Geology, Mathematics, Physics, Psychology; (IV) Economics, Education, History, Law, Philosophy, Political Science; (V) Applied Mathematics, Civil Engineering, Electrical Engineering, Mechanical Engineering, Mining and Metallurgy.

The Hopkins Marine Station, located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

Food Research Institute

The Food Research Institute of Stanford University has been organized under a grant from the Carnegie Corporation for the purpose of studying the production, distribution, and consumption of food. The institute will be under the control of a board of directors constituted as follows: Dr. Alonzo Englebert Taylor, Dr. Carl Lucas Alsberg, and Dr. Joseph Stancliffe Davis. It will begin its activities with the academic year 1921–22. The first year will probably be largely confined to organization and to a study of certain of the war food-problems. There will be available the Hoover War Collection and the various other collections derived from the records of the Committee for Relief in Belgium, the Food Administration, American Relief Administration, European Children's Relief, and the Supreme Economic Council, all of which were under the general direction of Mr. Herbert Hoover, one of the trustees of the university and likewise a member of the advisory board of the institute. The other members of the advisory board are: Dr. John C. Merriam, Mr. Julius Barnes, Mr. A. R. Howard, Mr. William M. Jardine, Mr. George C. Roeding, the president of the Carnegie Corporation, and the president of Stanford University.

A few fellowships will be available during the academic year 1921–22. It is probable that more will be added in subsequent years. Communications should be addressed to the Secretary of the Food Research Institute.

The University Year

The University year begins the first of October and is continuous throughout four quarters of approximately eleven and a half weeks each. Any three quarters constitute an academic year. The summer

quarter differs from other quarters only as the courses of study in the various departments may be contracted, or expanded, or specialized to meet the needs of a particular constituency; or, as in Physiology and Zoology, where the entire summer program is transferred to the Hopkins Marine Station at Pacific Grove. The emphasis of the summer quarter is placed on advanced and graduate work.

Location

The seat of the University, except for the advanced and clinical work in Medicine, is at Stanford University, in the Santa Clara Valley, thirty miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The campus contains about fifteen hundred acres, and is part of the University Trust of over seven thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco is about three miles east of the University grounds. Across the bay the Mount Diablo Range rises to a height of over four thousand feet, the Lick Observatory crowning Mt. Hamilton, the highest of the range. The Santa Clara Valley is one of the most attractive portions of the State in fertility, in natural beauty, and in the excellence of its climate. In winter the mercury rarely falls below 30 degrees, with an average midday temperature of about 55 degrees. In summer the midday temperature ranges between 60 degrees and 80 degrees, with occasional higher and lower numbers, the average being about 70 degrees; the nights are cool, the usual range being from 50 degrees to 58 degrees. The rainfall, normally about eighteen inches, is chiefly confined to the months from December to April, inclusive.

Buildings

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red-tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle, with open arcades on the outside. The extreme length of the Outer Quadrangle is 894 feet.

The Leland Stanford Junior Museum, situated a quarter of a mile from the Quadrangles, on the west side of the Palo Alto Avenue, contains the archæological and art collections of the University.

The Chemistry Building, located between the Quadrangles and the Museum, consists of two separate structures—the main building and the Physical Chemistry Laboratory.

Behind the central quadrangle are located the workshops of the Engineering departments, experimental laboratories, etc.

The dormitories are east and west of the Quadrangles. Encina Hall, situated east of the Quadrangles, and Sequoia Hall, west of the Quadrangles, are dormitories for men; the former will accommodate four hundred and fifty students, the latter, one hundred. Roble Hall, situated southwest of the Quadrangles, near Lagunita, is the dormitory for women and will accommodate two hundred and twenty-six students.

Encina Gymnasium, for men, is a brick building with a frontage of 330 feet, situated north of Encina Hall and near the athletic grounds. There are two main divisions separated by a small court. The drill hall is 120 by 65 feet, with hard maple floor. There are rooms for special exercises, shower and locker rooms in each wing, ample offices, and space for storage and laundry. An outdoor swimming pool 100 by 40 feet, is available to all undergraduate men, and to graduate men upon payment of the prescribed gymnasium fees.

Roble Gymnasium, for women, is a frame building equipped with apparatus for physical education. An outdoor swimming pool, 75 by 40 feet, is located near the gymnasium. In connection with the pool there are eighteen shower rooms, seventy-two dressing rooms, a laundry and sterilizing plant to care for the swimming suits, and a room for their drying.

The Thomas Welton Stanford Art Gallery, the first building of the second quadrangle group, has the same arched arcades as the original quadrangle, but the arched entrances, of which there are three, are higher and more elaborate in detail.

The Library Building is the central unit in the second quadrangle group. The ground floor provides a reading room for books set apart for collateral reading, a department of public documents, and administrative work rooms. On the main floor are the delivery hall, the reference and reading rooms, a browsing room, a periodical room, the card catalogue, and the administrative rooms; on the mezzanine and top floors, a large study room, and smaller rooms of varying sizes for seminary and special research work.

The grounds immediately about the University, constituting the campus proper, have been reserved in part for experimental and ornamental purposes, in part as residence sites for members of the faculty and others who may desire to live on the University campus.

The main buildings of the MEDICAL DEPARTMENT in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets. They consist of the Clinical and Laboratory Building, including Lane Hall, and Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds. The Lane Medical Library is situated on the corner of Sacramento and Webster streets, opposite the Clinical and Laboratory Building. The Library is a fireproof structure of Colusa sandstone, three and a half stories high, with steel stacks accommodating 60,000 volumes. The Stanford University Hospital, completed in 1917, is a concrete structure with a capacity of one hundred and thirty beds.

The HOPKINS MARINE STATION is located at Pacific Grove. The grounds consist of nearly five acres, at Almeja Point, with a sheltered landing place and harbor for boats of considerable size. A concrete building forty feet by eighty feet, three stories in height, provides the necessary laboratories, aquarium, store rooms, library, photographic dark rooms, etc. There are five laboratories available for classes and eight private laboratories for investigators.

CLUB-HOUSES

The STANFORD UNION is a club-house for men, first projected by Herbert C. Hoover of the class of 1895, and built by contributions from students, alumni, faculty, trustees, and friends of the University. The Union was opened in February, 1915, and is in charge of a Board of Trustees made up of two faculty members, three alumni, and two undergraduates. An addition to the Union, consisting of dining halls, and dormitory accommodations for one hundred and forty men, is under construction.

The WOMEN'S CLUB-HOUSE provides a social center for the women of the University, and is similar in plan and construction to that of the Union. The club-house was opened in February, 1915.

ADMISSION TO THE UNIVERSITY

CANDIDATES must be at least sixteen years of age. They must present satisfactory recommendations as to personal character and must offer approved credentials as indicated below. Application forms for candidates from other colleges and universities, and recommendation blanks for candidates from preparatory schools, may be obtained on application to the Registrar. For matriculation for a particular quarter it is important that applications and complete credentials be presented on or before the dates named below.

Minimum Requirements for Admission

FIRST-YEAR STANDING

The minimum requirements for first-year undergraduate standing are measured in terms of high school preparation, and imply the completion of a regular four years' high school course, or its equivalent, amounting to *fifteen* units (including at least two units in English). These requirements may be fulfilled without examination, or on examination, as provided below. But since the Unviersity holds no entrance examinations and does not admit students with entrance deficiencies, candidates are advised, in general, to remain in the preparatory school until the full requirements have been met.

Without examination. The minimum requirements for first-year undergraduate standing are fulfilled by candidates who have been duly graduated from approved preparatory schools with recommending (certificate) grades in subjects aggregating fifteen units (including at least two units in English), provided they are recommended also on the basis of character and seriousness of purpose. In schools which do not distinguish between a passing and a recommending (certificate) standard no subject will be credited unless the grade be at least five per cent higher than the lowest passing grade.

Holders of New York Regents' Diplomas granted *with credit,* and candidates from foreign countries who present credentials equivalent to those named and whose command of written and spoken English shall be deemed adequate for purposes of college study, may also be placed in this category.

On examination. The minimum requirements for first-year undergraduate standing are fulfilled by candidates not graduates of approved

preparatory schools who have passed the examination of the College Entrance Examination Board in subjects (including English) aggregating fifteen units. Partial fulfillment of requirements without examination (that is, graduation and recommendation on grounds of fitness, but with less than fifteen units of recommending grade) may be supplemented by examination, through the College Entrance Examination Board, in the subjects necessary to make up the required fifteen units. If recommended on grounds of fitness and after the completion of a full preparatory course, such candidates may take the comprehensive instead of the ordinary examinations of the Board (see p. 70).

ADVANCED STANDING

The minimum requirements for advanced standing are fulfilled by candidates whose previous record has been thoroughly satisfactory and who present credentials covering first-year requirements and the completion of one or more quarters of college work.

GRADUATE STANDING

The minimum requirements for graduate standing are fulfilled by graduates of colleges and universities of recognized standing whose credentials evidence ability and promise, and who expect to become candidates for advanced degrees, or for the high-school teacher's certificate, or who purpose to pursue regular advanced, professional, or research courses.

Admission of Men

There is no restriction upon the number of matriculants in graduate standing, nor in advanced standing where credentials cover full entrance requirements and 67 or more units of college work. Approved candidates in this group are assured of admission at the beginning of any quarter.

The number of matriculants in first-year undergraduate standing, and in advanced standing with less than 67 units of college work, is limited to 450 for the autumn quarter and 50 each for the two succeeding quarters. For the present no limit (below 450) is placed upon summer matriculants; but matriculation for the summer quarter does not necessarily insure registration for succeeding quarters, and if more than 50 summer matriculants re-register for the autumn quarter the number allotted to the autumn quarter will be correspondnigly reduced.

The selection of candidates within the limited group will be made immediately after August 1st, December 20th, March 1st, and June 1st, respectively, for the next succeeding quarter. If the number of candidates fulfilling minimum requirements does not exceed the permitted

number of matriculants all such candidates will be placed on the eligible list; if unfilled places remain, other candidates will be added to the list from time to time as approved credentials are received and as the Committee may determine. For such unfilled places (after the dates named) applications may also be considered from men of considerable maturity, twenty-one years of age or older, who do not fulfill the minimum requirements for undergraduate standing but whose incomplete preparation has been supplemented by practical training and experience of distinct educative value. Such candidates if admitted are special students and not candidates for a degree except as noted on page 97.

In case the number of candidates fulfilling minimum requirements exceeds the permitted number of matriculants, a preferred list will be made up immediately, after the dates named, which will include (1) candidates who have passed the comprehensive examinations of the College Entrance Examination Board with an average grade of 75 in the four subjects (see p. 97); (2) sons of alumni of the University; (3) persons awarded regional scholarships prior to the dates named; (4) other candidates, sufficient to make up approximately the permitted number, selected on the basis of superior fitness, taking into account force of character, courage, honesty; scholarship; exceptional qualifications of any kind, including qualities of leadership, influence exerted among schoolmates and associates, physical vigor, etc.

Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred."

The same scholarship standards and requirements apply as in the case of men, but with special regulations regarding the selection of candidates, as provided below.

Under the 500-limit the number of places open to new women students for the October matriculation is approximately 140; 35 of these are provisionally assigned to approved candidates for graduate standing; 105 to approved candidates for undergraduate standing. Proportional assignments will be made for the winter and spring quarters. Under the 500-limit it is at present possible to receive less than one-fourth of the number fulfilling the minimum requirements. Selection will be made as follows:

The credentials of all candidates for undergraduate standing who have fulfilled the minimum requirements will be canvassed immediately after July 20th, November 15th, March 1st, and June 1st, respectively,

for the next succeeding quarter, and a preferred list will be made up which will include (1) candidates who have passed the comprehensive examination of the College Entrance Examination Board with an average grade of 75 in the four subjects (see p. 70); (2) daughters of alumni of the University and of members of the academic staff; (3) other candidates sufficient to make up approximately the permitted number, selected on the basis of superior fitness, taking into account force of character, courage, honesty; scholarship; exceptional qualifications of any kind, including qualities of leadership, influence exerted among schoolmates and associates, physical vigor, etc.

The credentials of candidates for graduate standing will be canvassed immediately after September 1st, December 20th, March 1st, and June 1st, respectively. Selection, up to the assigned number, will be made on the basis of superior fitness.

Approximately thirty-five places assigned to new undergraduate women for the October matriculation will be filled on the basis of priority of application under the regulations in force before February 21, 1921, and until the applications received by that date are exhausted. No applications received later than February 21, 1921, will be considered for the list. Proportional assignments, on the basis of priority of application, will be made for the winter and spring quarters.

Women once admitted to the University will be allowed to continue without further application, so long as scholarship and conduct are satisfactory, and provided they present themselves for registration at the beginning of each quarter on the regularly appointed day; (but special restrictions apply to registration for the summer quarter, and to summer matriculants desiring to re-register for succeeding quarters). Places will not be held for women students after the regular registration day, except by permission of the Committee on Registration granted in advance.

The regular lists for the summer quarter will be made up immediately after June 1st, but it is not improbable that credentials received after this date will qualify for admission. Matriculation for the summer quarter, however, does not insure registration for any succeeding quarter. Summer matriculants will be considered in the same category as other applicants, and will receive only the advantage which inheres in early application or superior credentials. (For the summer quarter it is not expected that the number of women will reach the five hundred limit; all who fulfill the regular requirements may presumably be assured of admission if present on the regular Registration Day.)

Entrance Units

An Entrance Unit represents a year's study in any subject in a secondary school, constituting approximately one quarter of a full year's work. In assigning credit values two laboratory, drawing, or practice periods, not requiring additional study or preparation, are regarded as the equivalent of one recitation period. The length of the school year is assumed to be from thirty-six to forty weeks.

Approved Preparatory Schools

Approved Preparatory Schools are schools maintaining full four-years courses of high school work and accredited (1) by the New England College Entrance Certificate Board, by The North Central Association of Colleges and Secondary Schools, by the Association of Colleges and Secondary Schools of Southern States, by colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University.

The University records of first-year students will be considered as additional evidence of the standing of preparatory schools and of their good faith and success in meeting the requirements of the University, and such evidence will be made use of in determining as to the continuance of accrediting relations.

Entrance Examinations

The entrance examinations of the College Entrance Examination Board are held in June each year (in California, at Berkeley, Los Angeles, and other places).

Applications for examination must be addressed to the College Entrance Examination Board, 431 West 117th Street, New York, N. Y. They must be made upon a blank form to be obtained from the Secretary of the Board upon request.

If the application is received sufficiently early the examination fee will be $6.00 for candidates examined in the United States and Canada and $20.00 for candidates examined outside of the United States and Canada. The fee, which must accompany the application, should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least six weeks in advance of the first day of the examinations (that is, for 1921, on or before May 9, 1921).

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River, or in Canada,

must be received at least four weeks in advance of the first day of the examinations (that is, for 1921, on or before May 23, 1921).

The applications and fees of candidates who wish to be examined in the United States at points east of or on the Mississippi River must be received at least three weeks in advance of the first day of the examinations (that is, for 1921, on or before May 30, 1921).

When the candidate has failed to obtain the required blank form of application for examination, the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the exact examination center selected, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of $6.00 in addition to the usual fee.

A list of the places at which examinations are to be held by the Board is published about March 1st of each year. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1st.

In these examinations the University has designated 60 as the lowest passing grade.

A definition of Requirements in the various subjects in which examinations are held is given in Document No. 96, issued by the Board. (Price 15 cents; address Secretary, College Entrance Examination Board, 431 West 117th Street, New York, N. Y.)

THE COMPREHENSIVE EXAMINATIONS

Applicants who present evidence that they have satisfactorily completed a full preparatory course (amounting to fifteen entrance units) may be given permission to take the comprehensive examinations in place of the ordinary examinations covering fifteen entrance units.

The four subjects for the comprehensive examinations are to be determined as follows:

(1) English (three units);

(2) A foreign language, selected by the candidate (two, three, or four units);

(3) Either Mathematics, or Chemistry, or Physics, selected by the candidate (one, two, three, four, or four and a half units);

(4) A fourth subject, selected by the candidate, from the subjects in which examinations are held.

These four examinations must be taken at one time. At least two examinations must cover more than two entrance units each. In each subject selected the examination must cover all the units offered by the candidate in fulfillment of the minimum requirements for admission.

Entrance Subjects

The standard of preparation is the four-years high school course. The proper coördination of high school subjects for the individual pupil is regarded as primarily a problem for the secondary school; the University is prepared to recognize for entrance credit any subject having an established place in the secondary school curriculum, in which adequate instruction is given and which is pursued to satisfactory results.

No prescription of subjects, other than English, is made. Candidates desiring to study mathematics must obviously offer such elementary mathematics as is not taught in the University, and engineering students are expected to offer also trigonometry. Candidates desiring to study Latin should offer at least two entrance units in that subject. Elementary language courses in French and Spanish given in the University require the payment of special fees.

The requirements of the Lower Division (see page 101) may be anticipated to some extent by the proper choice of subjects presented for entrance credit. Generally it will be found advantageous, in the sense that it will allow greater freedom in the choice of subjects in the University, to include among the entrance credits presented three units in one foreign language or two units in each of two foreign languages, one unit in a biological science, one unit in physics or chemistry, and one unit in history. This is especially to be recommended when an engineering course has been definitely chosen, in which case trigonometry should also be included.

Most of the science departments in the University, including the Medical School, require a reading knowledge of French or German for graduation, and German is required for advanced degrees in the Chemistry Department. It is advantageous to begin these languages before matriculation.

All Lower Division students (except students coming from other institutions with satisfactory credit in a college composition course) will be required to satisfy the University standard in English Composition. This may be done by passing a special Matriculation Test given during matriculation week. The examination will test the candidate's practical knowledge of spelling, punctuation, and sentence structure, and his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination will be drawn for the most part from the candidate's own experiences.

A student who does not pass will be required to register in English A at once (unless, by reason of numbers, such registration is postponed to a later quarter), and remain in the course until his work is of passing grade.

Definition of High School Subjects

The definition of high school subjects given by the College Entrance Examination Board (Document No. 96 issued by the Board) will serve as a standard, and also for California schools, the outline prepared by the University of California. The following suggestions and explanations will indicate the attitude of the University in judging entrance credentials, but no attempt is made to enumerate all the subjects which may be properly included in the high school curriculum.

1. English.—The primary aim of instruction in English Composition in the secondary schools is clearness. Based upon grammatical correctness, which is the peculiar goal of elementary English Composition, this is the quality by which the Stanford matriculation test is rated. To attain these aims there should be a definite coöperation of the entire staff of the school.

The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of the student's time outside of class should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The work in English Literature should be given an average of at least three recitations a week throughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, together with an ability to read aloud intelligently both prose and verse.

In the History of English Literature preparation should consist in a brief outline with a view to making clear the character and the tendencies of the more important literary epochs and associating the chief books and authors in their proper periods.

2. Mathematics.—The work in Mathematics is usually distributed as indicated by the following unit values: algebra (1 to 2), plane geometry (1), solid geometry (½), trigonometry (½). Additional work may be offered in algebra and plane analytical geometry. The solution of numerous original problems and exercises is assumed throughout the course.

3. The Sciences.—In Physics, Chemistry, Physiology, Botany, Zoology, Hygiene, and General Science a full year's work in each is expected, comprising, preferably, two recitation periods and three double laboratory periods per week. Accurate notes of the laboratory work should be kept. Any two of the biological sciences (Physiology, Botany, Zoology) may be combined into a continuous year's course. Astronomy may be offered as a half-unit course.

Students who receive entrance credit in Chemistry, and who wish to continue the subject in the University, will be admitted at once to course *b* and will be required to begin course 1.

In Physiology the text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

In Botany the main thing is that the work shall be of a practical nature; the study mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work. If possible, the pupil should be allowed the use of a compound microscope; but when this is not practicable, microscopic demonstrations by the instructor are indispensable.

In Hygiene the work should include adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to the State in matters of sanitation and public health. Three periods per week of physical training and three periods in experimental laboratory work in Hygiene, and two recitations per week on Public Health, or an equivalent amount of work distributed over a longer period, will cover the requirements for one unit of credit.

4. History and Allied Subjects.—History should be offered in full unit courses covering respectively the following divisions: (*a*) Ancient, (*b*) Mediaeval and Modern, (*c*) English, (*d*) American. A full unit course in European History, which includes both continental Europe and the history of England, will be accepted. Civics may be offered as a part of American History, or as an additional half-unit course. (A two-years' course covering the first three subjects (*a, b, c*) will be accepted.) Biblical History and Literature and Economics may each be offered as a half-unit or a unit course.

In the History subjects, in addition to the text-book preparation, the following exercises are recommended: Supplementary reading, including the use of original material where possible, notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering mate-

rial from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena. Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition and of note taking in the class from talks by the teacher or reports of fellow pupils.

5-6. Spanish and French.—The elementary study of the languages, covering two years of daily recitations, should lay stress on the following points: (1) An accurate knowledge of the forms of the languages; (2) the elements of syntax; (3) the ability to turn easy English prose into French or Spanish; (4) the ability to translate ordinary French or Spanish into idiomatic English; (5) the ability to pronounce French and Spanish correctly.

(Students who have had one year of French in the high school and present one unit of credit for entrance into the University may take course A2. Those who have had one year of Spanish in the high school and present one unit of credit for entrance, may take course B2. Those who have had two years of French or Spanish in the high school, and present two units of credit for entrance, may take second-year work in the University.)

The intermediate requirements are intended to represent a third year of daily recitations. The specific demands are: (1) A thorough knowledge of modern French and Spanish syntax; (2) the ability to turn ordinary modern French and Spanish at sight into idiomatic English; (3) the ability to translate connected English prose of moderate difficulty into French or Spanish; (4) the ability to write French or Spanish from dictation; (5) some facility in speaking the languages.

(Students who have had three years of French in the high school, and present three units of credit for entrance into the University, will ordinarily take course A22. Courses A24 and A30 are also open to them. Students who have had three years of Spanish in the high school, and present three units of credit for entrance into the University, will ordinarily take course B22. Course B30 is also open to them.)

The advanced requirements will occupy a fourth year of daily recitations. At the end of this course the student should be able: (1) To read at sight any standard author not earlier than the seventeenth century; (2) to write in French or Spanish a short essay on some simple subject connected with the works read; (3) to translate correctly a

passage of modern English prose; (4) to carry on a simple conversation in French or Spanish; (5) to follow a lecture in French or Spanish.

The reading in the elementary course should cover from four hundred to six hundred duodecimo pages; in the intermediate course a similar amount should be read of prose and verse, a portion to be in the dramatic form; and in the advanced course the same quantity of prose and verse should be selected from standard authors not earlier than the seventeenth century, and these should be read with reference to their literary value.

The practice of writing compositions consisting in reproductions or paraphrases of the matter read should be begun in the intermediate course and followed by short themes along similar lines in the advanced course.

7. German.—Elementary German represents the work of two high school years with daily recitations. It should give the following preparation: The ability to read understandingly easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to express in correct German simple ideas concerning familiar things and to recognize German words and simple sentences when spoken. Careful attention should be given to pronunciation and accentuation.

The amount of work to be accomplished in the first year is approximately what is contained in a beginner's book such as Zinnecker's Deutsch für Anfänger, with some additional reading. The reading of the second year should be for the most part graded modern German from 200 to 300 pages. German should be the language of the classroom, instruction in conversation, composition, and grammar being based largely on the reading text.

Intermediate German represents a third year of daily recitations, designed to extend and strengthen the pupil's personal command of the language, and his knowledge of word formation and syntax. Here again the reading matter should be, in large measure, the center of the instruction, and some attention should be paid to literary appreciation.

Advanced German represents a fourth year of daily recitations. Besides rounding out the pupil's knowledge of grammar, and increasing his facility in speaking and writing, this course should make considerable addition to his passive vocabulary and develop his literary appreciation. It would be advisable to choose most of the reading from the works of recent or contemporary writers, but some work or works

of Lessing, Goethe, and Schiller should be studied intensively, while others might be assigned for outside reading and report.

8. Latin.—The reading required in elementary and advanced Latin (4 units) without regard to the prescription of particular authors and works, is not less *in amount* than Caesar, Gallic War, I–IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, Aeneid, I–VI. An equivalent amount of reading from authors other than those specified above may be substituted. The following are suggested: Caesar, Civil War; Eutropius; Nepos; Terence, Phormio; Cicero, Letters; Sallust; Virgil, Bucolics and Georgics; Ovid, Metamorphoses.

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

The school work in Latin should include much reading aloud, writing from dictation, and translation from the teachers' reading. Learning suitable passages by heart is also very useful, and should be practiced.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

9. Greek.—In Elementary Greek (2 units) the following requirements should be covered: Grammar, the inflections, and the essential points of syntax; Xenophon's Anabasis, Books I–IV, or an equivalent; prose composition. It is expected of every pupil that he be able to read Greek aloud without stumbling.

In Advanced Greek (1 unit): Homer, Iliad, Books I–III, or an equivalent; advanced prose composition. The pupil should have a good acquaintance with the forms and syntax of Homer, and be able to scan any given passage exactly and to read it rhythmically. In the writing of Greek the pupil should have a year's training beyond that required in Elementary Greek.

10. Drawing and Applied Art.—In each of the drawing subjects (Freehand, Mechanical, and Architectural) a unit of credit represents daily double periods for a year or single periods for two years.

In Freehand Drawing approximately two-thirds of the time should be given to representation and one-third to decorative and constructive design. *Representation* should include: Object drawing, boxes, books, bowls, vegetables, machine parts, drawn in various positions with attention to perspective facts in line and also to light and shade; plant forms, seed pods, shells, insects, animals, and simple landscape, drawn in line, in light and shade, and in color; composition, exercises in arrangement and adaptation of pictorial subjects into good composition, using both rhythmic line arrangement and harmonious color. The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The pupil should be equally familiar with the use of pencil and charcoal or brush. *Design* should include (1) Exercises in space filling, borders and all-over patterns with use of geometric and organic forms; (2) principles of constructive and decorative design applied to simple objects, as: in printing, a title-page or program; in textiles, a stencil or embroidery design for a curtain or table-scarf; in wood, working drawings for a chair, table, clock-case, book-rack, etc.; in metal, cabinet hardware and lighting fixtures, etc. Talks supplemented by photographs of the best paintings and architecture, and talks upon taste in home furnishing and appointments, with visits to worthy examples, should supplement the course with a view to developing an enlightened taste in art.

In Mechanical Drawing the pupil is expected to acquire neatness and accuracy in the use of drawing instruments. This course should include practice in line work, lettering, machine or architectural working drawings, and tracing. Recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will be given, however, to courses consisting of line work, lettering, and the construction of geometric figures.

11. Shopwork.—Two things are expected: First, a knowledge of the materials and tools used, and a thorough understanding of the principles

involved in the operation performed; second, manual dexterity, as evidenced by neatness, accuracy, and dispatch in the execution of a given piece of work.

Woodworking (½ unit) demands the ability to recognize the common varieties of wood, and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. The pupil should be familiar with the uses of the principal hand tools of carpentry and with care, be able to make the ordinary kinds of joints and splices, and be familiar with the operation of and lathe, jig-, band-, and circular-saws, and planing machines.

Forge Work (½ unit) demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The pupil should be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

Foundry Work (½ unit) demands a knowledge of the tools and processes used in the ordinary forms of green sand molding and core work. The pupil should have had experience in the operation of the cupola and know how to charge and operate it. He should have a knowledge of the properties of cast iron, and experience in pouring cast iron as well as in molding.

Machine Shop Work (½ to 1 unit) demands a knowledge of the tools and processes used in the working of iron, steel, and brass. The pupil should be able to execute all forms of vise-work, such as chipping, filing, scraping, fitting and finishing. He should be familiar, through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

12-15.—In Agriculture, Horticulture, Domestic Science, Commercial subjects, and Music the outline prepared by the University of California is suggested; also, in Music, the definition given by the College Entrance Examination Board.

FEES, EXPENSES, AND AID FUNDS

Tuition and Incidental Fees

FOR undergraduates matriculating in and after October, 1921, the Tuition Fee in all departments (except Medicine) will be $75 per quarter. For undergraduates matriculating before October, 1921, the Tuition Fee (except in Medicine) will be $40 per quarter.

The Incidental Fee for undergraduates (except in Medicine) is $20 per quarter. Students paying this fee have the privileges of the gymnasia, athletic grounds, Students' Guild, and Stanford Union or Women's Clubhouse, with membership in the Associated Students, without further quarterly fees.

The Tuition Fee for regular graduate students, except in the departments of law and medicine, is $50 a quarter. The Guild Fee is $2 per quarter. Graduate students may obtain the privileges of the Stanford Union, the Women's Clubhouse, the Associated Students, and the gymnasia by paying the required fees.

The Tuition Fee for graduate students registering for the first time in Law in and after October, 1921, is $65 per quarter. The Guild Fee is $2 per quarter. Graduate students in Law may have the privileges of the gymnasia and athletic grounds ($5), Stanford Union or Women's Clubhouse ($1), with membership in the Associated Students ($2), upon paying the quarterly fees.

The Tuition Fee for all students (graduate and undergraduate) registering for the first time in the School of Medicine in and after October, 1921, is $85 per quarter; the guild fee is $2 per quarter. Medical students desiring membership in the Stanford Union, Women's Clubhouse, or Associated Students, or the use of the gymnasia will pay the usual fees designated for these purposes. There will be no other fees aside from those listed above, except that a deposit to cover breakage or loss of apparatus and materials may be required in any department, such deposits being returnable, less charge for breakage, loss, or wear and tear of apparatus. The total deposits for this purpose may vary from $10 to $20 per annum. For graduate students registering in Medicine before October, 1921, the tuition fee will be $50 per quarter and the incidental fee $13 per quarter (in San Francisco, $12). For undergraduates registering in Medicine before October, 1921, the tuition fee will be $50 per quarter, the incidental fee $20 per quarter.

Students who have paid the regular fees of the Medical School in full and wish to take additional work before graduation will pay for this additional work such fees as are decided upon in conference with the Dean and the Executive Head of the department in which such courses are taken.

The General Fee at the Hopkins Marine Station (covering all charges) is $75 per quarter for undergraduates and $50 for graduates. (For students matriculating before October, 1921, this fee will be $40.)

In addition to the above fees, students in laboratory courses pay for the materials which they use, and in some courses small syllabus and other fees may be charged.

The fees for either half of the summer quarter are one-half of the corresponding fees for the whole quarter.

(Tuition and Incidental fees are ordinarily returnable, when duly claimed in writing within two months after the date of withdrawal from the University, as follows: two-thirds of the incidental fee and the whole of the tuition fee will be refunded when the student withdraws within two weeks after the date of registration; one-half of the incidental fee and two-thirds of the tuition fee when the student withdraws at a later time but within four weeks of the date of registration. Laboratory fees (except in Chemistry, where a different procedure is applicable) are likewise returnable when duly claimed in writing within two months after the date of withdrawal from the University, as follows: the whole amount will be refunded when the student withdraws within one week of the beginning of a quarter, and one-half the amount if the student withdraws before the middle of a quarter; but no fees will be refunded on account of withdrawal after the middle of a quarter, nor unless claimed in writing within two months after the date of withdrawal.)

A Diploma Fee of $5 is charged all persons receiving degrees from the University.

Cost of Living

There are two dormitories for men (Encina Hall and Sequoia Hall) and one for women (Roble Hall).

Undergraduate men, not living with parents or guardians, are required to room in Encina Hall or Sequoia Hall during their first three quarters in the University. Application for room assignments in the Halls should be made to the Dean of Men several weeks in advance of the opening of the quarter, and should be accompanied by a deposit fee of $5. Men students not rooming in the Halls may live only in places approved by the University (consult Information Bureau or Dean of

Men). Rooms in the Halls cost from $16.50 to $27 per quarter, payable at the beginning of each quarter. Students rooming in the Halls are expected to supply their own linen and bedding. Board may be obtained at the Stanford Union, Sequoia Hall, and in various clubs, the cost ranging from $30 to $40 per month.

Undergraduate women, not living with parents or guardians, are required to reside in Roble Hall for three quarters. Women students not residing in Roble Hall may live only in places approved by the University (consult the Dean of Women). Rooms in Roble Hall cost $30 per quarter and board $90 per quarter. Room rent is payable in advance for the quarter; board in advance for the quarter or in two installments ($45 each). Applications for rooms in Roble Hall should be made to the Dean of Women and must be accompanied by a deposit of $5. Rooms are assigned in order of application, and early application is advisable.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board (for men) can be obtained in private houses, at from $30 to $40 per month. There are usually coöperative clubs, in which the cost of board and room may be further reduced. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. There is also trolley connection with San Jose, Los Gatos, and intermediate towns.

The cost of living for students of Medicine in San Francisco is about the same as at Stanford University. There are numerous rooming and boarding houses near the medical buildings.

FIXED EXPENSES PER QUARTER

The following is an estimate of the expenses *per quarter,* for undergraduate men, *for the items named:*

	Medium	High
Tuition and Incidental Fees	$ 95.00	$ 95.00
Books, Syllabus Fees, etc.	15.00	30.00
Board	90.00	120.00
Room	18.00	45.00
Incidentals (other than clothing and railway fares)	35.00	50.00
Laundry and clothing	35.00	100.00
Total for the quarter	$288.00	$440.00

(For undergraduates matriculating before October, 1921, tuition and incidental fees will be $60. Laboratory fees are additional.) The

cost of board is variable and the estimate given for men is conservative; a lower cost is possible in coöperative clubs. For women residing in Roble Hall room and board amount to $120 for the quarter.

Self-Support of Students

A considerable number of students find it possible to earn the whole or part of their expenses while attending the University. Success depends upon the student himself. The University, through the Appointment Secretary's Office, and in other ways, is able to help the student both in finding work and in making plans. It cannot, however, assume the responsibility of supplying work for all applicants. The student who combines initiative with industry and reliability, and who is willing to adapt himself to circumstances, is the one who succeeds in this as in other undertakings. As a result of experience it is believed that no properly prepared student who is possessed of good health and who has no dependents need hesitate to undertake a University course because of lack of means; if he is sufficiently in earnest in his desire to "work his way through" opportunities will not be lacking.

Students who are contemplating earning their own expenses at the University should not register for a heavy course nor attempt to engage in more than one student activity, particularly during their first quarter at the University (self-supporting students whose scholarship is high are given preference in awarding scholarships). While working one's way is an education in itself, there are many valuable features of college life that must be foregone if one is earning a living. Students who have the necessary means will do well to devote any energy not needed in their studies to various extra-curricular activities rather than to earning their expenses.

The student is not advised to enter the University without a reserve fund, to provide for immediate needs or unexpected contingencies. This fund ought ordinarily to amount to at least $200; it is preferable for new students to have a larger sum. The student needs time to get acquainted, to become adjusted to University methods and requirements, to systematize his University work, to learn about the various opportunities for earning money, and to discover how much time he can afford to devote to self-support, keeping in good health and still making study his main object. In general, the student should not undertake to earn a larger proportion of his expenses than is absolutely necessary; his working time is too valuable for this and should be devoted to his studies to the largest extent possible. It is recommended that no new student plan to devote more than four hours a day to earning his expenses.

The most ready to hand means of earning one's board at the University, whether for men or women, is by waiting on table. From three to four hours per day will cover the time required, which comes when it is least missed. Such chances are to be found in the dormitories, in the cafés, in boarding houses, and in public and private eating clubs. Other forms of work, for the relatively unskilled, are gardening, house work, care of children, janitor service, special jobs in connection with gymnasium and athletic activities, manual labor in connection with laboratory sections, agencies for laundries and other businesses, etc. Positions requiring more or less preliminary training have to do with plain cooking, clerking, bookkeeping, stenography and typewriting, music for dances, newspaper reporting, printing, tutoring, the management of student enterprises, etc. For advanced students in the various departments there are opportunities to act as assistants in quiz sections, in the reading of examination papers, reports, etc. Laboratory assistants are usually students either in graduate or undergraduate standing, as are also some of the part-time assistants in the various administration offices. Other means of support are found in the scholarships and fellowships offered, and through the considerable loan funds now available. A limited number of opportunities during the short vacations, particularly at Christmas time, can be found in San Francisco and elsewhere, as special Post-Office clerks or salesmen in the larger stores.

New students who must begin earning as early as possible, will do well to be on hand a little in advance of the opening of the University and to come equipped with bicycles and working clothes. They should promptly enroll with the Appointment Secretary, Room 170 in the Administration Building. Women should discuss their plans also with the Dean of Women.

Assistantships

Student-assistant positions in the various departments, held by either undergraduates or graduates, range in pay from $35 to $150 each per quarter, the average being about $75 per quarter. These do not include a considerable number of minor positions in laboratories or elsewhere where mere labor without skill or special knowledge is required, nor do they include those positions where the full time of the assistant is demanded.

Each department selects and recommends for appointment its own assistants. Requests for information as to pay and duties, and applications for appointment, should be addressed to the Executive Head of the department in which a position is sought.

Loan Funds

The following loan funds (with the exception of the Women's Student Loan Fund) are administered by the Committee on Scholarship. In general not more than one hundred dollars may be loaned to any one student, and provision is made for repayment, without interest, not later than one year after date of graduation or withdrawal from the University. Applications should be filed with the Academic Secretary of the University.

Horace Davis Loan Fund.—Mr. Horace Davis, charter member of the Board of Trustees, provided in his will a fund of $10,000, the interest of which is to be used as a loan fund for students. The amount at present available for loans is $1,250.

William Burton Barber Loan Fund.—Established in 1914 by Mrs. Anna M. Barber, in memory of her son, William Burton Barber, '02, "to provide for needy and worthy students." This fund, increased by over $5,000 from the estate of Mrs. Jeannette Taylor, is available for men and women of the senior class who have been registered in the University for at least one quarter. The amount at present available is $6,569.80.

Stanford Alumni Association Graduate Loan Fund.—Loans are restricted to candidates for advanced degrees, including the A. M., J. D., M. D., and Ph. D. degrees, preference being given to candidates for the Ph. D. degree. In making loans emphasis shall be placed upon character, scholarship, and intellectual promise, in addition to personal need. $245.

Stanford Alumni Association Undergraduate Loan Fund.—"For worthy undergraduates." $500.

Harker Alumnae Association Loan Fund.—Established in 1917 by the Alumnae Association of Miss Harker's School, a large number of whose graduates have been Stanford students. There are no restrictions except that if a graduate of Miss Harker's School applies she shall be given preference, other qualifications being equal. $225.

Class of 1906 Loan Fund.—No restrictions except such as may be imposed by the Committee on Scholarship. $100.

Associated Students Undergraduate Loan Fund.—For the benefit of worthy undergraduates who are members of the Associated Students of Stanford University. $250.

Women's Student Loan Fund.—The Women's Student Loan Fund was organized by the Women's Conference by private subscription, and is increased yearly by small sums earned by a committee of the Conference. It is available on the following conditions, for small emergency loans: (1) No interest to be charged until one year after the

student leaves the University; interest then begins at six per cent, and is payable annually; (2) all loans to be paid within five years after the student leaves the University. Application for loans from this fund should be made to the Dean of Women.

The Dickey Scholarships

In 1914 the Trustees of the University received from the estate of the late W. J. Dickey, of Fresno, the sum of ten thousand dollars for the establishment of the W. J. Dickey Scholarship Fund "to aid young men from Fresno County, preferably from Fresno City, to make their way through Stanford University." The Trustees of the Dickey Estate are Mr. E. A. Waldron, Cashier of the First National Bank of Fresno, and Mr. M. B. Harris, of the Fresno bar. The selection and appointment of the W. J. Dickey scholars is made by the President upon the recommendation of the Committee on Scholarship, subject to the provision that the Trustees under the will of Mr. Dickey shall be consulted and their advice taken before any appointment is made. No one may be appointed to a Dickey Scholarship unless he shall have been a resident of the County of Fresno, and preferably of the City of Fresno, for at least two years prior to his appointment; and no scholarship may be held or shared by one person for more than four years.

No one may be appointed to a W. J. Dickey scholarship unless he has fulfilled all the requirements for regular standing in the University.

Other things being equal, preference shall be given, in making appointments, to first-year students.

Appointments are made for the college year, but may be terminated earlier at the discretion of the committee. Appointments may be renewed at the discretion of the committee, for a total period not to exceed four years.

In making its recommendation the Faculty Committee shall keep in mind that the donor of the W. J. Dickey Scholarship Fund wished the benefits therefrom to be derived by persons who are financially unable to make their way through college. In addition to this fact, character, scholarship, and seriousness of purpose shall be taken into consideration in determining appointments.

The W. J. Dickey Scholarship Fund provides for two scholarships of $300 each, payable in nine monthly installments.

Application for appointment to the W. J. Dickey Scholarship, with pertinent evidence and testimonials, are to be made to the President of the University, who will refer it to the appropriate committee. Candidates shall be recommended by the committee to the President, who will submit the names to the trustees of the Dickey estate, and upon

their approval appointments shall be made by the President of the University.

Memorial Scholarship

The trust establishing the Leland Stanford Junior Memorial Scholarship provides a fund of $6,000, the income of which shall be used "to pay the living expenses, cost of books, fees, and other necessary expenses of the holder." Under the present arrangement the Memorial scholar receives in cash $25 per month or a total of $225 for the academic year. In addition, the trust sets aside a room in Encina Hall for the use of the holder of the scholarship, and for which no charge is made.

The Brodie G. Higley ('99) Scholarship

In 1915 Mr. Brodie G. Higley, of the class of 1899, established, through the Alumni Association, an annual scholarship of one hundred and fifty dollars, "open to either a man or woman undergraduate student who is in good and regular standing in the University, to whom the money will be a real assistance." In 1919 Mr. Higley deposited with the Board of Trustees securities to the amount of $3,000 to perpetuate this scholarship.

The selection and appointment of the Brodie G. Higley Scholar will be made by the President upon the recommendation of the Faculty Committee on Scholarship. Appointment will be made for the college year, but may be terminated earlier on recommendation of the Committee and at the discretion of the President.

Applicants for the scholarship must have been registered in the University for at least three quarters prior to the time of application. In making appointments it will be the purpose of the University to emphasize character, scholarship, and intellectual promise, as well as personal need. The scholarship will ordinarily be payable in six equal installments, beginning October 1st. Applications should be filed with the Academic Secretary of the University.

The Mrs. McDowell Roble Club Scholarship

The sum of one hundred and fifty dollars per year has been presented to the University by Mrs. John E. McDowell for the purpose of establishing a scholarship to be granted to a member of Roble Club who has been a student in the University and a resident of Roble Hall for two years, the award being made at the close of the junior year.

The George E. Crothers Law School Scholarship

In 1917 Judge George E. Crothers, of the class of 1895, established a Law School Scholarship of the value of two hundred dollars annually.

The Bertha Hyde Braly Scholarship

In 1916 Mrs. J. M. Braly, of Fresno, established an annual scholarship of two hundred and fifty dollars, in memory of her daughter, Bertha Hyde Braly, '97. The scholarship is available for a woman student who is a resident of either Fresno County or Santa Clara County.

The Wilmer J. Gross ('16) Scholarship

In 1919 Mrs. Wilmer J. Gross (Dorothy Davy, '16) founded a scholarship of the value of $150 annually, in honor of her husband, Wilmer J. Gross, '16, who died in service in France; the scholarship to be open to all undergraduate men in the University who have been in residence at least one year. The appointment shall be based primarily on scholarship, but in addition good moral character and general excellence shall be considered.

The Dorothy Metz ('17) Scholarship

In 1920 Mrs. Lillian C. Metz established an annual scholarship, of the value of $200, in memory of her daughter, Dorothy Amanda Metz, '17, who died in service, the scholarship to be awarded "to a worthy and ambitious student of limited means."

The Gertrude Gardiner Scholarship

In 1920 Miss Gertrude Gardiner established a scholarship of the annual value of $200, to be known as the Gertrude Gardiner Scholarship, and to be awarded to a non-sorority woman who has been a student in the University for at least two quarters and who is a resident of Roble Hall.

The Ernest A. Love ('18) Scholarship

In 1920 Mr. and Mrs. Allan Love founded a scholarship, of the value of $150 annually, in honor of their son, Ernest A. Love, '18, who died in service in France; the scholarship to be open to worthy and needy undergraduate men, preference being given to students from Arizona.

The Marcelle Henriette Rouiller ('15) Scholarship

In 1920 Madame Jeanne R. Rouiller established a scholarship of the value of $160, in memory of her daughter, Marcelle Henriette Rouiller Calley, '15; the scholarship to be awarded to a worthy and needy student for the payment of tuition fees.

The Stanford Scholarships

In 1919 the Trustees of the University established fifteen undergraduate scholarships, without stipend, to be known as the Stanford Scholarships, and to be bestowed on the basis of special scholastic attainments.

The John Maxson Stillman Scholarship in Chemistry

From the Stillman Testimonial Fund, presented to Professor John Maxson Stillman by graduates and former students in Chemistry, and others, on the occasion of his retirement from active service in the University, in May, 1917, there has been established the John Maxson Stillman Scholarship in Chemistry. The amount available is $150 per year, and the scholarship is open to undergraduate or graduate students in the Department of Chemistry upon nomination by the department faculty and approval of the President.

The William Irvin Weaver Scholarship

In 1919 Miss Eva Ray Weaver, '13, established a scholarship of the annual value of $150, in honor of her brother, William Irvin Weaver, '13, who died in service in France. The scholarship is to be known as the William Irvin Weaver Scholarship, and is to be awarded to a graduate or undergraduate student in the department of Chemistry, on the recommendation of the department faculty, subject to the approval of the President of the University.

The Hiram C. Fisk Scholarship

In 1920 Mr. W. D. Fisk established a scholarship of $180, in memory of his son, Hiram C. Fisk, who is on the Stanford Honor Roll.

The Alumni Jordan Scholarships

The Alumni Jordan Scholarship Fund has been founded largely by physicians who were at one time students of Stanford University. Its purpose is to pay the tuition fees of two or three medical students of high standing, with the understanding that at some future time the amount will be returned without interest. The student who once receives this scholarship loan will be entitled to its use throughout his medical course provided his work continues to be satisfactory.

The Dr. Emmet Rixford Scholarship in Surgery

In 1921 Dr. Emmet Rixford, Professor of Surgery in the Stanford Medical School, made a gift of $500, to be awarded to some graduate of Stanford Medical School, or to some member of the staff of the school of rank under that of Assistant Professor, to be chosen by the Medical Faculty, for work on some surgical problem, anatomical, physiological, pathological, or clinical, the problem to be approved by the faculty.

The Ira S. Lillick Scholarship

In 1920 Mr. Ira S. Lillick of the class of 1897, established a scholar-

ship of the value of $500, to be awarded annually to a worthy student, preferably in Law.

The Mrs. Ira S. Lillick Scholarship

In 1920 Mrs. Ira S. Lillick established a scholarship of the value of $500, to be awarded annually to a worthy student, preferably in Law.

The University Scholarships

In 1919 the Trustees of the University established thirty Stanford Scholarships for Graduate Students, each paying $200 per year of three quarters. Scholarships are awarded for a term of one year, at the expiration of which time the Scholar may be reappointed. Holders of Scholarships are required to pay tuition and incidental fees, the graduation (diploma) fee, laboratory expenses, and all similar charges laid upon other graduate students.

The E. C. Converse Scholarship Fund

In 1921 the University received a bequest of $50,000 from the estate of Edmund C. Converse for the establishment of the E. C. Converse Scholarship Fund. The income of this fund is to be used under the direction and in the discretion of the President or other ranking executive of the University in the establishment and maintenance of scholarships of not exceeding $500 per annum to be paid to needy and deserving students.

Thomas Welton Stanford Fellowship in Psychic Research

From the "Psychic Fund," created by Mr. Thomas Welton Stanford, in 1913, the Trustees have established the Thomas Welton Stanford Fellowship for Research in Psychic Phenomena.

The Buckel Fellowship

In 1914 the University established, through the coöperation of the Trustees of the estate of Dr. C. Annette Buckel, a Research Fellowship for the study of backward and feeble-minded children. The annual income from the Buckel estate is approximately $500, and this is supplemented by a like sum appropriated by the Trustees of the University, making the total amount available for the fellowship $1,000.

Fellowships in Education

In 1919 two fellowships were established in Education of the value of $500 each: one, jointly by Professor Cubberley and the Board of Trustees, to be known as the Fellowship in School Administration; the other jointly by Professor Terman and the Board of Trustees, to be known as the Fellowship for the Study of Superior Children.

Ordinarily these will be awarded only to those who have completed at least one year of graduate study and who are ready to proceed to the Doctorate.

The University Fellowships

In 1917 the Trustees of the University established two University Fellowships, and in 1919 six additional Fellowships, of the value of $750 each per year (three quarters). These fellowships are awarded annually by the Committee on Graduate Study with the purpose of fostering advanced study and research in the University.

In general these fellowships will not be awarded to students in their first year of graduate study.

The Cyril F. Elwell ('07) Scholarship

In 1919 Mr. Cyril F. Elwell, '07, established a scholarship of the annual value of $500, to be awarded by the Committee on Graduate Study to a graduate student in the Department of Electrical Engineering, upon the recommendation of the Department.

Belgian Relief Commission Fellowships

In 1919 the Committee for Relief in Belgium arranged for the establishment and support of a number of fellowships for Americans to undertake graduate study in Belgian universities, and an equal number for advanced Belgian students in American universities. Four of these American fellowships have been assigned to Stanford University.

Teaching Fellowships in Chemistry

Two Teaching Fellowships in Chemistry of the value of $600 each were established by the Board of Trustees in 1917.

Sperry Fellowship in Chemistry

In 1919 the Sperry Flour Company established an industrial fellowship in Chemistry for the study of wheat and wheat flour. The company in establishing the fellowship offers the use of its mills, bakeries, and other plant equipment to supplement the University facilities.

Harvard Club Scholarships

The Harvard Club of San Francisco offers two scholarships, of the annual value of $350 each, to students residing in the neighborhood of San Francisco who may desire to pursue undergraduate studies in Harvard College, or postgraduate studies in Harvard University. Other things being equal, preference will be given to those desiring to pursue undergraduate studies. In awarding these scholarships the scholarly attainments of the applicants as shown by their records, their

character, needs, and general development, will be considered. Applications should be made in writing not later than February 15th, to the Chairman of the Scholarship Committee of the Harvard Club of San Fráncisco, Mr. George S. Potter, 1827 Pacific Avenue, San Francisco, California.

Yale Alumni Association Fellowship

The Yale Alumni Association of California awards annually the sum of $300 (to which Yale University adds an amount equal to the charge for tuition) to a graduate of the University of California or of Stanford University, for the pursuit of graduate study at Yale. Applications should be addressed to the Secretary of the Yale Alumni Association, University Club, San Francisco.

The Rhodes Scholarships

Under the will of the late Cecil Rhodes two scholarships are assigned to each State and Territory in the United States. Each scholarship has a yearly value of $1,500, and is tenable at any college in the University of Oxford for three successive academic years.

Candidates must be unmarried, must be citizens of the United States, and must be not younger than 19 nor older than 25 on October 1st of the year in which they are elected. All scholars shall have reached before going into residence, at least the end of their sophomore year at some recognized degree-granting university or college. In accordance with the wish of Mr. Rhodes, the trustees desire that "in the election of a student to a scholarship, regard shall be had to (1) his literary and scholastic attainments, (2) his fondness for and success in manly outdoor sports, such as cricket, football, and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for the protection of the weak, kindliness, unselfishness, and fellowship, and (4) his exhibition during school days of moral force of character, and of instincts to lead and take an interest in his schoolmates."

Students' Guild

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. This is now accomplished for non-contagious diseases through an arrangement with the Palo Alto Hospital and, for medical students, with the Stanford University Hospitals in San Francisco. For the care of contagious diseases, provision has been made by the maintenance of a Detention Hospital on the University Campus. A reduction of two dollars per day from the regular hospital charges is given all members of the guild; a substantial portion of the charges for medical attention and special hospital service is paid by the guild.

GENERAL REGULATIONS

Registration

ON the appointed Registration Days, in October, January, April, and June, each student must obtain a certificate of registration *in person,* at the Registrar's office.

Matriculated students may register after the appointed Registration Days upon payment of a special fee: two dollars on the first or second day, three dollars on the third day, four dollars on the fourth day, and so on up to the maximum of ten dollars. Registration of undergraduates and specials will not be permitted later than three weeks after the beginning of instruction.

Study-List Card

At the Registrar's office the student receives a card for selection of studies for the quarter. This card, properly filled out, and approved, for lower-division students, by the Committee on Lower Division Administration, for others, by the Major Department, must be filed with the Registrar at the time of registration; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering late are admitted to particular classes only by permission of the instructor concerned. All work for which university credit is desired must be duly registered.

Enrollment in Classes

A student desiring to enter any class presents his certificate of registration to the instructor for enrollment at the beginning of each quarter. Whether the student is qualified for enrollment in a particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the appropriate committee a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, and not involving courses required of lower-division students, if they do not give the student too many unit-hours, or too few unit-hours, and if presented

within three weeks after the beginning of the quarter, are granted without question. If presented at a later time in the quarter they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise accepted but presented after the close of the quarter, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last four weeks of the quarter, action will be deferred until the close of the quarter.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average quarter's work. In general students may register for as few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the medical adviser; and where conditions or failures have been incurred in the preceding quarter, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reasons; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any quarter's work, unless, in exceptional cases, permission to register for additional units is granted in advance. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the quarter.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one quarter. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or recitation and two hours for preparation or subsequent reading and study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly

occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one quarter are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Scholarship Grades

In reporting the standing of students at the end of each quarter the following grades are used: A, B, C, D, passing grades, corresponding in a general way to the terms, 'excellent,' 'good,' 'fair,' 'barely passed' ('+,' passed, without defining grade; '±,' conditioned; ('—'), failed). In grading classes, 'A' is considered as normally applicable to not more than fifteen per cent, 'B' and 'C' to thirty-five per cent each, and 'D' to fifteen per cent of the students of passing grade. (This distribution of grades is advisory, and is understood to admit of a certain degree of flexibility in the handling of small classes.)

Conditions and Failures

A student conditioned or reported incomplete in any subject must remove the deficiency within one calendar year or the work will be considered a failure.

A deficiency due to failure to take or pass a written examination is removed by passing a similar test on the same work. This may be done by taking a regular class examination in the course if repeated in time, or by taking a special written examination to be held on Wednesday to Saturday, inclusive, of the eighth week of any quarter. A student is entitled to one examination within the year, either regular or special.

Where deficiencies are due to failure to take or pass an oral examination, the time for holding a new oral examination to remove the condition or incomplete, is determined by the instructor concerned. Compliance with the regulations for written examinations, so far as practicable, is required.

Deficiencies due to other causes may be removed by any work or test satisfactory to the department concerned.

Scholarship Reports and Notices

Mid quarter reports on scholarship are obtained from all instructors, and students reported as doing unsatisfactory work are notified of their deficiencies.

At the close of each quarter each department is expected to send to the Committee on Scholarship, on blanks to be furnished by the Registrar, a list of such students as, in its opinion, may not profitably continue as major students in the department, together with information as to the reasons for such opinion, causes of unsuccess, qualifications for possible success in other lines of study, etc. (The Committee on Scholarship may require the withdrawal of such students from the University, or may permit re-registration in some other major subject, with the consent of the department concerned.)

At the middle and at the end of the quarter each department is notified of all serious deficiencies in scholarship affecting students whose major work is in that department.

When a student is seriously delinquent in scholarship, the fact is communicated to his parent or guardian.

Probation and Disqualification

Standard work is obtaining fifteen units, and as many grade points as registered units, per quarter. This standard applies to each quarter and also as an average standard to be maintained on the entire record of the student.

At the end of the first or second quarter in the University a student is placed on probation who fails to obtain twenty-two counts (the sum of units and grade points). He is considered as failing in his studies, and is disqualified for further attendance at the University if he does not obtain ten counts. At the end of subsequent quarters less than fifteen counts will result in 'disqualification.'

At the end of the second and every subsequent quarter the student's entire accomplishment is compared with what would have been obtained had he done standard work. If he is above, at, or even slightly below standard his scholarship standing is considered normal. But if his deficiency becomes considerable the result is probation, and in serious cases disqualification.

Application for reinstatement is not considered until the end of one calendar year after disqualification, and readmission is granted only upon a showing of thoroughly satisfactory accomplishment elsewhere. Work in another college or university must reach an average quality half way between passing and one hundred. If the institution is a member of the Association of American Universities work averaging one-third above passing in place of one-half will be accepted. The grades above passing in any institution will be taken as covering equal portions of the percentages between passing and one hundred. In any case the average must be equal to that required for graduation from

such institution. Work outside of a college or university must be of academic character, at least in part, and must show diligence, ability, and maturity of purpose.

Leave of Absence in Case of Delinquent Scholarship

Leave of absence will not generally be granted to a student on probation, nor to any student whose work during the current quarter is unsatisfactory, unless applied for at least four weeks before the end of the quarter.

From Special to Regular Standing

Special students may be entered in regular standing on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance examinations, university work to the amount of seven units for each entrance unit may be offered in university subjects which are also included in the entrance group. (Entrance examinations are given by the College Entrance Examination Board in June of each year.)

A special student whose general university record is deemed proof of superior scholarship, may also become a candidate for graduation, on approval of the Committee on Admission and Advanced Standing, on completing two hundred and twenty-five units of university work including lower division and major requirements.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. In general, four units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and seven units of advanced credit for each extra entrance unit representing advanced work. Application for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed

by the institution in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved by the major department and by the department in which work is to be taken.

Work of a special character taken outside of regularly scheduled classes, *in absentia* or during vacation periods, may be credited under the following conditions: (1) The work must be acceptable as part of the major requirements for the A. B. degree in the department whose courses it parallels or supplements, must be given necessary supervision and direction by such department and subjected to tests equivalent to those in regularly scheduled courses, and must be approved by the major department and by the Committee on Admission and Advanced Standing; (2) Such work may not be offered by students whose general scholarship record is unsatisfactory, nor to cover deficiencies due to poor scholarship; (3) Not more than forty-five units may be credited toward graduation for such special courses.

The last quarter's work of every candidate for a degree must ordinarily be taken in this University; but in special cases, students who have obtained at least one hundred and thirty-five units in resident work, and who have completed all major department requirements, may be exempted from this regulation and permitted to complete the required number of units under the provisions noted above.

Advanced Credit

Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (one hundred and thirty-five unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate must present a full certified transcript of his college record, including entrance credit, and a letter of honorable dismissal.

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high school course, or where high school and normal school courses together cover six years' work, may ordinarily be granted an advanced credit of sixty-seven units; in the case of California State Normal Schools, beginning with the 1921 graduating classes, this advanced credit may be increased to ninety units, provided, in the judgment of the Committee on Admission and Advanced Standing, the courses taken by the student are substantially equivalent to the work of the lower division of the University.

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above for extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools. But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applications for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Graduate Standing

Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 104). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than forty-five units of university work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the medical adviser. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more quarters may re-enter at the beginning of any quarter without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

The Committee on Student Affairs exercises the authority of the University over all students individually with respect to personal conduct, and, with the exception of athletic and debating teams, over student organizations which bear the name of the University, or which represent the University in non-academic activities, and, in general, assumes such measure of authority over non-academic organizations of students as may be needful to safeguard the general good name and well-being of the University community.

Individual or collective student enterprises, using the University name, which involve the absence of the participants from the University, must receive the official sanction of the Faculty Committee concerned.

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

In 1908 the Board of Trustees of the University provided that in all future rentals or leases of houses as fraternity chapter houses it shall be expressly stipulated that no intoxicating liquors of whatever kind shall ever be sold or used on the premises. The Trustees also by formal resolution requested the Academic Council to prohibit the use of liquor in fraternity chapter houses, students club houses, and other student lodgings.

This action of the Board of Trustees is in harmony with the instructions given by the Academic Council to its Committee on Student Affairs, and defines the policy of the University. Prohibition of the use of liquor extends to all student lodgings whether on the campus or elsewhere. The University assumes that the act of registering as a student implies full acceptance of this policy.

Student Control

In 1911–12 the Faculty Committee on Student Affairs entered into an agreement with the University Conferences by which responsibility for the government of the students and for maintaining University standards was assumed by the men and women of the University. This delegation of responsibility, temporarily recalled, for men, in 1918, was resumed in 1919–20, under an agreement between the president and the men of the University. Under this agreement the responsibility

for maintaining University standards among the men students is assumed by the senior class. The Men's Student Council is responsible for the enforcement of University rules governing student conduct, all actions of the Council being submitted directly to the President for sanction or disapproval.

University Health Control

The University exercises an advisory control over student health affairs through the Committee on Public Health.

Every student upon entering the University is required to report for a brief examination. General health and evidence of effective vaccination are the important factors in the examination. Any condition which may place a limitation on the amount or kind of work planned by the student may be discussed with him or made the subject of a report to his major department or to the Committee on Registration.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical examination at the beginning of each quarter.

VACCINATION

Not later than three weeks after the day of registration every student must file with the Committee on Public Health a certificate, signed by the vaccinator, who must be a duly licensed and practicing physician, giving exact dates of vaccination, and showing either successful vaccination within seven years, or unsuccessful vaccination twice within the past twelve months.

Non-compliance with these requirements will result in a fine of two dollars after three weeks, and an additional fine of four dollars after four weeks, and cancellation of registration after five weeks from the day of registration.

Certificates are to be filed at the Registrar's Office. They will be returned upon request. "Conscientious objections" will not be recognized as exempting anyone. Unavoidable delay, or failure to secure a satisfactory certificate, will not exempt anyone from the fine.

(It is advised that candidates comply with this requirement before coming to the University, and that vaccination certificates be sent in advance by mail. Blank certificate forms may be obtained on application to the Secretary of the Public Health Committee, at the Registrar's Office.)

"Immunity Reaction" will be considered equivalent to one unsuccessful try. Only "vaccinia" will be accepted as successful vaccination.

DEGREES AND TEACHING CREDENTIALS

CANDIDATES may be presented for graduation in January, April, June, and October.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Lower Division Requirements

The Lower Division consists of the first and second years of the University curriculum. Its object is to introduce the student to fundamental fields of human interest, and to this end it requires the completion of certain studies during the first two years. The members of the Committee on Lower Division Administration stand in the same relation to students enrolled in the Lower Division as that occupied by departmental advisers toward their major students.

The work of the first two years is made up of group requirements, subject requirements, and electives, under the supervision of the Committee on Lower Division Administration. These requirements are as follows:

GROUP REQUIREMENTS

During each of the first two years the student is required to take nine units in each of the following groups: (1) language and literature (English and foreign), formative art; (2) natural sciences, mathematics; (3) social sciences (including history, political science, economics, philosophy, and education).

SUBJECT REQUIREMENTS

Six units in English composition (English 2, three units per quarter for two quarters), to be taken during the second year in the University. (A course in elementary English composition (English A) is also prescribed for first-year undergraduates who do not satisfy the matriculation test.)

Twenty-two units in one foreign language, or fifteen units each in two foreign languages. (This requirement may be anticipated in the high school, its equivalent being three entrance units in one foreign language or two entrance units each in two foreign languages.)

Nine units in a biological science, and nine units in either Physics or Chemistry. (One of the sciences may be anticipated in the high school, its equivalent being one entrance unit in a biological science, or in Physics or Chemistry, or in general science.)

Nine units in American history and nine units in general history, normally taken during the second year. (One of the history requirements may be anticipated in the high school, its equivalent being one entrance unit in history.)

Twelve units in Problems of Citizenship, to be taken during the first three quarters in the University (four units per quarter).

All undergraduates are required to devote three schedule hours per week, for the first six quarters, either to physical or military training. (Students entering with advanced standing may offer equivalent training in other colleges or universities in whole or partial fulfillment of this requirement.)

A particular course may count toward the fulfillment of both subject and group requirements.

Major Subject

The selection of a Major Subject will ordinarily be made at the end of the second year, upon completion of the requirements of the Lower Division. The Lower Division student may, however, at the beginning of any quarter, designate the particular department in which he expects later to do his major work, and may be directed to the department for consultation and advice regarding electives before making up his study-list.

At the beginning of the junior year, and upon completion of the Lower Division requirements, the student selects as a Major Subject the work of some one department. The Major Department has the authority to prescribe not more than sixty units in the Major Subject (exclusive of elementary courses in the Major Department which may be offered for entrance). The Major Department shall also recommend such other courses as it may consider desirable, and shall exercise an advisory supervision over the student's curriculum from quarter to quarter. It shall be considered a general principle of University policy, to be departed from only in exceptional cases, that at least ninety of the one hundred and eighty units required for the degree be taken outside of the Major Department.

In applied science the Major Department may prescribe so much of the entire one hundred and eighty units as it shall deem essential to the technical or professional requirements of the major subject.

Within these limitations the work in all departments is elective, and the student may freely choose any course which his previous studies have prepared him to undertake.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the approval of the Lower Division Committee, or of the Major Department, any course in the University which his previous training has prepared him to undertake.)

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is conferred upon candidates who have fulfilled the following requirements:

(1) The completion of one hundred and eighty (quarter) units of university work, including the required lower division courses, together with the required six quarters physical or military training (six units). (A special student who has completed two hundred and twenty-five units of university work, including all lower division and major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered by the Committee until after the student has completed one hundred and eighty units of university work.)

(2) The acquirement of as many grade points as there are units registered for on the candidate's record card. A unit of credit passed with a grade of 'A' counts three grade points; with a grade of 'B,' two grade points; with a grade of 'C,' one grade point; with a grade of +, one grade point; with a grade of 'D,' no grade points. A 'condition' removed does not count grade points, no matter what the final grade may be. (Advanced credit for work in other institutions counts one grade point for each unit of credit.)

(3) The completion of the major subject requirements as prescribed by the Major Department.

The recommendation of the Major Department is necessary to graduation.

Forty-five units constitute a normal year's work (see p. 93), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least forty-five units (including, except in special cases, the last fifteen) must be completed in this University.

Bachelor of Laws

The degree of Bachelor of Laws (LL. B.) is conferred upon candidates who have satisfactorily completed two years (ninety units) of non-professional study in the pre-legal curriculum and three years of professional study in the law school.

Candidacy for Advanced Degrees

Candidates for advanced degrees must be registered in the university and must file with the Registrar an application for candidacy. In the case of candidates for the degree of Master of Arts or Engineer this application must be accompanied by a program of study, approved by the department faculty concerned. The approval of this program of study by the Committee on Graduate Study is necessary for admission to candidacy for the degree. It is to be submitted within the first six weeks of the second quarter of work in the university. Candidates for the degree of Doctor of Philosophy, to gain admission to candidacy, must file in the same manner their program of study, and obtain the approval of the program by the Committee on Graduate Study; they must also obtain the final approval of the Committee as set forth below in Section 4 of the conditions governing the granting of that degree. Advanced degrees will be conferred only upon the recommendation of the Committee on Graduate Study. In no case will the degree of Master of Arts be conferred in less than three quarters. Statements once submitted must be kept on file and can not be withdrawn even after substitutes have been filed and accepted. Candidates for the degrees of Juris Doctor and Doctor of Medicine are exempt from the requirement that a program of study shall be filed a definite time in advance.

Master of Arts

The degree of Master of Arts (A. M.) is conferred on graduates of this university, and on those who have had equivalent training elsewhere, upon the satisfactory completion, in residence, of one academic year of work beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, and the passing of such general or final examination as the major department may require. A longer period of residence will be required of candidates who are inadequately prepared or who devote less than the normal proportion of time to their graduate course. Work may be done in connection with the regular courses of instruction or, as research, independently of them. The program of study must form a consistent plan of work pursued with some definite aim,

whether it lies wholly in a single department or field of study, or in more than one. At least two-thirds of a year's work must be devoted to advanced or graduate study in the major subject or in intimately allied subjects.

A candidate for the degree of Master of Arts must display ability to do independent work. A report upon the character of the work done shall be made by each instructor under whom a candidate is registered.

The master's thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the Committee on Graduate Study by the date on which instruction closes for the quarter in which the degree is taken; upon acceptance, it shall be suitably bound and placed in the University Library. The Committee on Graduate Study requires that the original, not a carbon copy, of the master's thesis, written on paper of standard size and weight, be submitted and filed. The title-page shall be of the form prescribed by the Committee.

Engineer

In the departments of applied science the professional degree of Engineer is conferred on graduates of this university, and on those who have had equivalent training elsewhere, upon the satisfactory completion, in residence, of one or two years of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, showing ability to do independent work. Upon the recommendation of the department, and in order to permit the carrying on of advanced work with equipment or under conditions not available at the University, the requirement of residence may in part be waived.

The special regulations stated above for the degree of Master of Arts apply also to the degree of Engineer.

Juris Doctor

The degree of Juris Doctor (J. D.) is conferred on students who have previously received the academic degree of Bachelor of Arts, or an equivalent degree elsewhere, upon the completion of the three years' professional law course. The first year of the professional law course may be taken by candidates for the A. B. degree.

Doctor of Medicine

The degree of Doctor of Medicine (M. D.) is conferred on students who complete the five years' curriculum in medicine (which includes the interne year), based upon the three years' pre-medical course as laid down by the University.

Doctor of Philosophy

The degree of Doctor of Philosophy (Ph. D.) is conferred on graduates of this university, and on those who have had equivalent training elsewhere, upon the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. At least the last year of study must be spent in residence at this university.

2. At least one year prior to the date when the degree is sought, the candidate must show a reading knowledge of French and German in his special field. The faculty of the department in which the major work is taken determines whether this requirement has been met.

3. The program of study must include one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the program of study; except that such minor subjects may be waived upon the recommendation of the major subject department, with the approval of the Committee on Graduate Study, when the breadth and extent of the candidate's training appear to the Committee to justify such a course.

4. Final approval of candidacy must be obtained from the Committee on Graduate Study, not later than the close of the second quarter preceding the one in which it is proposed to take the oral examination. This approval will be based on the report of a special committee of seven members of the faculty to be appointed by the chairman of the Committee on Graduate Study, of whom one member shall be chosen from each department represented by the major and minor subjects of the candidate, and the other members (one of whom shall be designated as chairman) from the faculties of other departments. This special committee shall be appointed at the beginning of the last year of candidacy and shall consider and report (*a*) whether the candidate has pursued in a satisfactory manner the program of study upon which the provisional approval of candidacy was obtained, as evidenced by the record of his studies and by such written work as he may wish to present for inspection; (*b*) whether the preliminary draft of his thesis, or such portion of it as may be deemed representative, gives promise of being completed satisfactorily as provided below; and (*c*) whether he is eligible, in respect of comprehensive grasp of his major and minor subjects, to be admitted to the final oral examination. The report will be based in part on a conference with the candidate ordinarily of not more than one hour's duration. The major and minor departments should also certify to the special committee the results of such comprehensive written examinations as can be conveniently set before the time of final approval of candidacy.

5. The candidate must present a thesis at least six weeks before the close of the quarter in which the degree is sought, in form and content acceptable to his department and to the Committee on Graduate Study. Before the degree is conferred he must either (*a*) deposit one hundred printed copies of the thesis in the university library, or (*b*) deposit an original typewritten copy of the thesis with the librarian, and at the same time either deposit the sum of $50 or file an acceptable surety bond in the sum of $100 with the treasurer of the university, as a guarantee that the thesis will be printed and the required number of copies deposited within two years of the date of receiving his degree. If one hundred copies of the thesis are deposited within the requisite period of two years, the candidate's deposit or bond will be returned to him; if not, the Committee on Graduate Study may use the sum forfeited for the printing, by the university, of the thesis or of such portion as is deemed best.

In case the candidate can present evidence that his thesis, or an acceptable portion of it, has been accepted for publication by a reputable scientific journal or in the proceedings of a learned society, and that publication within two years has been assured, the degree may be conferred after he has deposited, together with the typewritten copy of the thesis, a sufficient sum to cover the cost of one hundred off-prints from the journal or volume in question. When the thesis is of unusual length, and at the same time is of such a character that a representative portion, of independent value, can be excerpted, printed copies of this portion may be deposited with the librarian, in place of the whole, with the approval of the department concerned and the Committee on Graduate Study. In such cases the printed portion must amount to not less than twenty-four octavo pages, and must be accompanied by a statement indicating the nature of the entire thesis.

6. In addition to satisfying the requirements of major and minor departments, the candidate must pass a final oral examination approximately three hours in length by an examining committee of the faculty, conducted in the presence of such other members of the faculty as care to attend. This examining committee shall consist of (1) the chairman of the Committee on Graduate Study, presiding; (2) the professors in the group of departments in which the major subject lies; (3) in addition, the professor or professors in charge of the minor subject or subjects, if lying in another group of departments. The five groups of departments are language and literature, history and social sciences, biological sciences, pure mathematical and physical sciences (including applied mathematics), engineering sciences. The departments of philosophy and education are for this purpose members of all groups; but,

in case of a candidate in either subject, shall be affiliated to the group to which the candidate's work is most germane. The committee may at its discretion invite other members of the faculty to participate in the oral examination.

Persons who contemplate offering themselves as candidates for the Ph. D. degree are invited to correspond with the instructors in the subjects involved.

Advanced Degrees in the Medical School

The departments of the Medical School are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these departments and department faculties as to departments and department faculties at the University, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford, or an equivalent training elsewhere, and must have the approval of the department faculty in which the degree is sought. The M. D. degree will ordinarily be required as a prerequisite for those wishing to do clinical work.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted towards the degree of Doctor of Medicine.

TEACHING CREDENTIALS

Teacher's certificates are issued by County, and City and County Boards of Education under the provisions of Section 1519, subdivision 5 (*a*), Section 1775, subdivision 1 (*a*), and Section 1792 of the Political Code of California. The State Board of Education of California, in accordance with the state law, has empowered the University (through the School of Education) to grant recommendations for teachers' certificates, valid in this state, and of four grades; (1) Elementary, (2) Intermediate, (3) High School, and (4) Special. Preliminary certificates, valid only for cadet teaching in connection with Education course 28, also are granted. These are valid for teaching and are granted under the following conditions:

1. For the Elementary-School Certificate

(Valid for teaching in the eight grades of the elementary schools.)

1. The possession of a Bachelor's degree from this University.

2. The completion of at least 15 quarter units of college work in each of three of the following departments or lines of work: English,

some other language than English, Graphic Art, History and Economics, Mathematics, Physical Science, Biological Science, General Science.

3. The completion of at least 18 quarter units of work in the Department of Education, which must include: (*a*) Practice in Teaching and School Management, 6 units (courses 27 and 28 will satisfy this requirement); (*b*) Elementary Education, 6 units (courses 10, 50, and 51 may be used to satisfy this requirement); (*c*) Additional work in Education, 6 units (courses 1, 2, 3, 12, 19, 37, 46, and 49 are suggested as desirable courses from which to select, though other courses may be taken if desired).

2. For the Intermediate-School Certificate

(Valid for teaching in the seventh, eighth, or ninth year of the public schools of California, when organized as intermediate schools.)

1. The possession of a Bachelor's degree from this University.

2. The completion of at least 23 quarter units of approved work in the Department of Education, in the case of non-normal-school graduates, and of at least 8 units, in the case of normal-school graduates.

3. The completion of additional work in subject-matter courses of not less than the following:

(*a*) For Normal-School Graduates, either of California State Normal Schools or of normal schools elsewhere which have been accredited by the State Board of Education as equivalent, not less than one year (45 quarter units) of college work, of which at least 30 units shall have been in two of the following departments or lines of work: Latin, German, French, Spanish, English, History, Mathematics, Physical Science, Biological Science;

(*b*) For non-Normal School Graduates who possess a valid California Elementary-School Teacher's Certificate, not less than two years (90 quarter units) of college work, of which one-half (45 units) shall have been in three of the departments or lines of work listed above under (*a*).

3. For the High-School Certificate

(Valid to teach in the high schools or elementary schools, or to do supervisory work, in California. In all cases the candidate must hold a Bachelor's degree from some institution requiring eight years of high-school and college work for such degree, must satisfactorily complete the required work in two Teaching-Majors, or one Teaching Major and two Minors, and in addition must complete in this Univer-

sity a varying amount of graduate study, to be determined by the following conditions:)

GROUP I: STANDARD GROUP

1. One year (at least 39 quarter units) of graduate study, which shall include one full-year course of advanced or graduate work (not less than 6 units) in at least one subject in which recommendation is sought.

2. At least 23 quarter units in Education, including the following courses: (*a*) a course in School and Classroom Management (2 units); (*b*) work in actual practice of teaching, with conferences (6 units); (*c*) a Teacher's Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted or listed under the work in Education (4½ units maximum for all such courses); (*d*) a course in Secondary Education, presenting particularly the purpose and attainable goals of high-school work (3 units); (*e*) such other courses relating to the theory, function, and administration of public education, as are needed to complete the required 23 units.

3. Candidates who have taught or been engaged in school supervision in this or any other state, and who present credentials showing that they have done so with reasonable success, may be excused from six of the twenty-three units of Education represented by the practice teaching, and may also be allowed to substitute other work in education for the course in School and Classroom Management. All students desiring such exemption must make application on Form B, to be obtained at the office of the Secretary of the School of Education, Room 52.

GROUP II: EXPERIENCED-TEACHERS' GROUP

Teachers who have had at least seventeen months of satisfactory experience in elementary or secondary schools, in this or other states, may be exempted, if their application for such exemption is approved by the School of Education, from as much as one-half of the year of graduate work and from as much of the required work in Education as their experience seems to warrant. In any case all such persons will be expected to meet at least the following requirements:

1. Two quarters (at least 26 quarter units) of graduate study, which shall include not less than 4 units of advanced or graduate work in at least one subject in which recommendation is sought. Students who can arrange their graduate work so as to be present during the summer quarter may satisfy the resident requirement by one and a half quarters (20 quarter units), if other requirements can also be met in this time.

2. Such number of satisfactory units in Education, including (*a*) Secondary Education (3 units) and (*b*) a Teacher's Course in at least one subject in which the candidate expects to be recommended for certification, as may be determined after consideration of the individual case. Application for exemption from Education requirements on the basis of teaching experience must also be made on Form B.

GROUP III: NORMAL-GRADUATE GROUP

1. Graduation from an approved normal school.

2. Two quarters (at least 26 quarter units) of graduate study, which shall include not less than 4 units of advanced or graduate work in at least one subject in which recommendation is sought (with permission to reduce this to one and a half quarters as under Group II).

3. At least 8 quarter units in Education, including (*a*) Secondary Education (3 units); (*b*) a Teacher's Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by and listed under the work in Education (4½ units, maximum for all such Teacher's Courses). In lieu of Teacher's courses other courses in Education must be taken to make up the required eight units.

GROUP IV: SPECIAL NORMAL-COURSE GROUP

1. Two quarters (at least 26 quarter units) of graduate study, which shall include not less than 4 units of advanced or graduate work in at least one subject in which recommendation is sought (with permission to reduce to one and a half quarters as under Group II).

2. At least 8 quarter units in Education, including (*a*) Secondary Education (3 units); (*b*) a Teacher's Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given and be accepted by and listed under the Department of Education (4½ units, maximum for all such courses). In lieu of Teacher's Courses other courses in Education must be taken to make up the required eight units.

3. One half-year (preceding or following the two quarters of graduate work) in any California State Normal School which offers a special half-year (or two terms) of full-time instruction, especially selected for college graduates preparing for high-school certification in California, and approved by the State Board of Education.

4. FOR SPECIAL CERTIFICATES

A Special Certificate of Secondary grade, authorizing the holder to teach only such branch or branches and in such grades as are named in such certificate (manual and fine arts, technical arts, household arts,

commercial subjects, physical culture, music) may be granted as follows:

1. To recommended candidates who have had at least four years' instruction beyond that required for graduation from a high school maintaining a four-year course in advance of the eighth grade, or who have had an equivalent amount of training.

2. At least one-half (90 quarter units) of this four years of collegiate instruction must have been devoted to study or work in the special subject or subjects in which application for certification is made, and in such subjects as are strictly supplementary thereto, as arranged and approved by the School of Education of this institution. (See *Annual Announcement of the School of Education,* Part VII.)

3. At least 18 of the 90 quarter units required to be given to the special subject or subjects must have been devoted to the study of the pedagogical subjects suited to the training of a secondary-school teacher; at least one-third of which (6 units) must have been devoted to practice teaching, including methods of instruction in the special subject or subjects, under competent supervision. Ordinarily courses 20, 27, and 28 must be included.

4. Time devoted in the secondary-school period to study or work in the special subject or subjects in which the candidate desires certification may be substituted at the rate of half-time for similar studies or work in the collegiate period. Such substitution, though, shall not exceed one-half of the total time required in the special subject or subjects. One year's successful experience in teaching may be substituted for half of the required pedagogical work, and two years' teaching experience may be substituted for the entire pedagogical requirement; but all such substitutions are subject to determination by the School of Education in individual cases. Application for such substitutions must be made to the School of Education.

5. For Preliminary Certificates

Recommendations for Preliminary Special or Preliminary Regular High School Teacher's Certificates, authorizing the holder to do cadet teaching, without salary, in any secondary school in the county, are also granted to those enrolled for Practice in Teaching, Education 28. Those wishing to do practice teaching in elementary schools secure the recommendation for such preliminary certificates through the State Normal School at San Jose.

Application for a Teaching Credential

1. When any student has spent the requisite time in study at this

University, and has completed the prescribed program of studies in Majors and Minors for the High School Teacher's Recommendation, or the special course of study required by the School of Education and by the regulations of the state for an Elementary-School, an Intermediate-School, or a Special or Vocational Type of Teacher's Recommendation, or the requirements for recommendation for certification in some other state. such student shall make application for the type of Recommendation for a certificate desired and leave such application with the Secretary of the School of Education, in Room 52. The Recommendation desired shall be granted only after application has been approved by the Committee on Credentials and Degrees of the School of Education.

2. All Teacher's Recommendations for the High School Certificate in California hereafter issued will state on their face the particular Majors and Minors which the holder thereof has made special preparation to teach, and holders of the old form of general recommendation will be permitted to have their preparation and teaching experience adjudged in terms of the new standards for Majors and Minors, and to exchange the old forms of recommendation for the new.

3. Whenever the holder of any Recommendation for either a regular or a special High School Certificate, specifying Majors and Minors or special subjects on its face, shall by further study build up Minors into Majors, or add new Majors or Minors or special subjects, then such addition shall be recorded on the face of the Teacher's Recommendation.

APPOINTMENT OFFICE

The Appointment Secretary is a member of the President's executive staff, with offices in the Administration Building. The duties of this secretary are briefly as follows:

1. To assist students and graduates of the University to obtain permanent employment or promotion in the kind of work for which they have prepared themselves.

2. To help students of the University who are earning part or all of their own expenses to find suitable part-time employment.

3. To help students who wish it to find full-time temporary employment, whether the purpose be merely to earn money or to become more proficient in their chosen field of work.

4. To give students and graduates who make inquiries, as accurate information as possible regarding the actual opportunities presented by the different fields of employment. The investigation which this work involves is an important feature of the Appointment Secretary's duties.

Statistics covering the work accomplished are compiled annually.

The Appointment Secretary aims to secure and keep on file a complete record of the education, experience, and personal qualifications of each candidate for a permanent position, to be used by prospective employers in determining whether or not the candidate is qualified for the position to be filled. That the statements made may be frank and reliable, they are never shown to candidates.

The University reserves the right of refusing to extend its coöperation to candidates who apply for positions for which they are manifestly unfit.

Forms for registration may be obtained of the Appointment Secretary upon request. When asking for forms it is necessary to state whether part-time, temporary, or permanent employment is wanted, and, in the case of permanent employment, whether teaching or some other profession.

Teachers must renew registration annually, preferably in January. Those desiring other kinds of permanent employment should renew their registration the first of every month—particularly the first of September, which is the beginning of the academic year. Those seeking part-time or temporary employment must renew registration at the beginning of each quarter. The responsibility of renewing registration is placed upon the candidate.

New students who expect to earn part or all of their expenses at the University, should apply to the Appointment Secretary for registration forms as soon as they are sure they will be admitted to the University.

Candidates for permanent positions are charged $1.50 at the time of registration. This sum covers the actual cost of collecting records. A small charge is also made for editing, copying, and mailing records. All classes of candidates are charged for telephonic and telegraphic bills incurred in their behalf. No charge is made for other services rendered candidates for part-time or temporary work, and no charge is made for the securing of positions of any kind.

All communications should be addressed to The Appointment Secretary, Stanford University, California.

COURSES OF INSTRUCTION

(The asterisk (*) indicates that the course is repeated for the quarter named; otherwise courses announced for more than one quarter are continuous. The enrollment in the various courses is printed in italics at the end of the descriptive matter.)

ANATOMY

Arthur William Meyer, Frank Mace McFarland, Professors
Clara S. Stoltenberg, Associate Professor.
Edgar Davidson Congdon, Assistant Professor.
Emily M. Bartlett, Assistant.

Required Courses

1. General Histology and Microscopic Anatomy.—A course dealing with the elementary structure and vital activities of the animal cell, the histology and development of the tissues, and their combination into the organs of the Vertebrates, with especial reference to the Mammalia. Elementary histological technique is taught during the course. Open to students who have had 135 units of work, including a year's biological training, or its equivalent.

8 units, autumn quarter (McFarland) Lec. by arrangement, Lab. MWF 10–12, TTh 9–12, W 1:05–4:05
4 units, winter and spring quarters (McFarland) Lec. by arrangement; Lab. (winter) WThF 1:05–4:05; (spring) MTW 1:05–4:05
autumn, 42; winter, 25; spring, 25.

2. Osteology.—Students will be expected to familiarize themselves thoroughly, on their own initiative, with the surface anatomy of the bones of the skeleton. This individual work will be supplemented by the laboratory study of special aspects of the subject under the supervision of instructors. Not given as a separate course, but in connection with courses 3, 4, and 5.

winter, 45.

3-4-5. Dissection of (3) the Head, Neck, and Thorax; (4) the Upper Extremity; (5) the Abdomen and Lower Extremity.—No one will be assigned to less than one of the above parts nor will credit be given for less, save by special arrangement.

8, 3, 6 units (respectively), autumn, *winter, and *spring quarters (Congdon, Meyer), autumn Lab. MTThF 9–12; (winter) Lab. MTWThF 9–12; (spring) Lab. MTWThF 1:05–4:05
autumn, 28; winter, 45; spring, 52.

6. Neurology.—A study of the structure of the central nervous system of man by means of dissections and prepared slides, supplemented by dissections of the central nervous system of other mammals.

5 units, autumn and *winter quarters (Stoltenberg) (autumn) Lec. TTh 11, Lab. MWF 8–11; (winter) Lec, TTh 8, Lab. MWF 9–12
autumn, 25; winter, 12.

Optional and Advanced Courses

7. Cytology.—The course deals with the structure and functions of the animal cell with special reference to the reproductive processes. Lectures, laboratory work, and assigned reading. Open to those who have had courses in Histology, Embryology, and Microscopic Technique.

3 to 5 units, spring quarter (McFarland) MTWThF afternoons

8. Special Courses.—Advanced Courses in Histology, Histogenesis, Microscopic Anatomy, Cytology, or Microscopic Technique will be planned to suit the needs of individual students. Open to those who have had courses in Histology and Embryology.

2 to 5 units, winter and spring quarters (McFarland) MTWThF afternoons
winter, 3; spring, 3.

9. Topographical Anatomy.—The work consists of the laboratory study of frozen sections of fetal, infantile, and adult cadavers made in various planes, and of dissected and specially injected preparations, supplemented by models and atlases. It is suggested that students who can afford the time supplement courses 3, 4, and 5 by the respective portions of course 9 immediately on completing the dissection of a part Open to students who have completed courses 1, 2, 3, 4, and 5.

2 to 5 units (Meyer) By arrangement
winter, 14.

10. Anatomy of the Sense Organs.—A study of sense organs by means of dissections and prepared slides, supplemented by models and prepared dissections.

2 to 4 units, autumn and *winter quarters (Stoltenberg) (autumn) TTh 8–11, (winter) by arrangement
autumn, 5; winter, 6.

11. Morphogenesis.—Factors influencing animal form and structure are considered. Especial attention is given to man and mammals. Lectures and assigned reading. Elective.

2 units, winter quarter (Congdon)

12. Human Embryology.—This course will be offered as soon as adequate provision can be made. Course 13 in the Department of Zoology is a prerequisite.

13. Investigation and Special Work.—The facilities of the laboratory are always at the disposal of properly qualified students or physicians

who desire to undertake the investigation of some problem in gross or microscopic anatomy or in embryology. Theses and special work must be arranged for individually, but may begin at any time.

(MEYER)
autumn, 5; winter, 3.

14. Conferences in Anatomy.—Special topics are assigned and outlines and references provided for discussion twice or thrice weekly.

2 to 5 units (MEYER) By arrangement

REQUIREMENTS FOR ADVANCED DEGREES.—In addition to the requirements published in the University REGISTER and the *Announcement of the School of Medicine,* students desiring to be admitted to candidacy for the degree of Master of Arts in Anatomy must have satisfactorily completed one year's work in histology and microscopic anatomy, at least one quarter of embryology, and possess a knowledge of laboratory technique adequate for the investigation to be undertaken. For admission to candidacy for the degree of Doctor of Philosophy a reading knowledge of both French and German is further required.

DEPOSIT FEES.—A deposit of $2.50 for microscopes and of $10 to cover damage to or loss of bones, is required of all students registering in gross and in microscopic anatomy. This sum, less charges for damage or loss, is refunded at the close of the academic year, except in the case of students discontinuing work. Such may obtain the refund at the end of the quarter. Students who are not registered in medicine are charged a fee of $15 for each of courses 3, 4, and 5, and $5 for each of the other courses.

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, WILLIAM ALBERT MANNING, HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY, Professors.
HEINRICH WILHELM BRINKMANN, Instructor.

The courses in Applied Mathematics are planned primarily to meet the needs of students in Engineering. The aim is to make these courses practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, can not pursue these courses successfully.

Students majoring in any engineering department should have entrance credit in the preparatory subjects of algebra (one and one-half

units), plane and solid geometry, and plane trigonometry. This preparation is regularly required for admission to any of the following courses except Descriptive Astronomy.

The mathematics regularly required of students in Engineering consists of courses 1, 2, and 3. Each of these courses runs two quarters, 5 unit-hours per quarter, and they will regularly be taken in the order *1a, 1b, 2a, 2b, 3a, 3b*. It is possible, however, to take *2b* and *3a* simultaneously, but this can be permitted only in the case of students having thoroughly satisfactory records in the preceding courses. Students whose preparatory records show excellence, not only in mathematics, but in general training, may, with the approval of the instructor, enter course *1b* without having taken *1a*.

1. Elementary Analysis.—This course presupposes a familiarity with the elements of algebra and trigonometry, and is designed to strengthen the command of the student over these subjects and to give him a working knowledge of the method of coördinate geometry. Readiness in the application of the fundamental principles of algebra, trigonometry, and geometry to the solution of numerical problems is of fundamental importance to the engineer, and this side of the work is emphasized throughout the course.

1a. First half of course 1.

5 units, autumn, *winter, and *summer quarters (MANNING, MORENO, BRINKMAN, AGUERREVERE)

autumn (4 sections), 38, 39, 32, 38; winter, 66; summer 36.

1b. Second half of course 1.

5 units, autumn, *winter, and *spring quarters (MANNING, MORENO, BRINKMANN, AGUERREVERE)

autumn, 34; winter (4 sections), 29, 33, 32, 29; spring, 59

2. Calculus.—An elementary course in Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications.

2a. First half of course 2.

5 units, autumn, *winter, *spring, and *summer quarters (HOSKINS, MORENO, MANNING, BRINKMANN)

autumn (2 sections), 39, 38; winter, 34; spring (4 sections), 39, 25, 23, 40; summer 14.

2b. Second half of course 2.

5 units, spring, *autumn, *winter, and *summer quarters (MANNING, HOSKINS, MORENO)

autumn (3 sections), 25, 41, 38; winter (2 sections), 50, 33; summer, 12.

3. Theoretical Mechanics.—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies.

The course is designed as preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of courses 1 and 2.

3a. First half of course 3.

5 units, winter and *spring quarters (Hoskins) — Winter, MTWThF 10; Spring, MTWThF 9
winter, 116; spring, 65

3b. Second half of course 3.

5 units, spring quarter (Hoskins) — MTWThF 10
spring, 115

4. Theoretical Mechanics.—A more advanced course, presupposing course 3 or its equivalent. (Given if there is sufficient demand.)

5 units, autumn quarter (Hoskins) — Hours to be arranged

8. Engineering Mathematics.—This course is designed to meet the needs of students in Electrical Engineering, and should be taken by those intending to take course 10 in Electrical Engineering.

3 to 5 units, autumn quarter (Moreno) — By arrangement
autumn, 8

9. Graduate Courses.—Advanced courses in Theoretical Mechanics, Hydromechanics, Theory of Heat, Theory of the Potential Function, Theory of Elasticity, or other subjects, may be arranged for students having the requisite mathematical training.

ASTRONOMY AND GEODESY

The course in Descriptive Astronomy is designed especially to meet the needs of students who have time for only a general knowledge of the subject. Course 11 is designed especially for students of Engineering and Geology who desire a working knowledge of practical astronomy. The other courses are intended for students of Mathematics or Civil Engineering who wish to prepare themselves for geodetic work.

10. Descriptive Astronomy.—This course consists of a general survey of the various branches of astronomy, including a study of the celestial sphere, the bodies of the solar system, comets, the fixed stars, and other heavenly bodies. The treatment is non-mathematical.

5 units, autumn quarter (Townley)
autumn, 22

10a. Observational Astronomy.—Study of constellations and various astronomical bodies: Elementary methods of determining latitude and longitude. One afternoon or evening per week. Supplementary to course 10.

1 unit, autumn quarter (Townley)

11. Practical Astronomy.—The theory and practice of the determination of latitude, azimuth, time, and longitude, with sextant and engineer's transit. Intended especially to meet the requirements of students of civil engineering, geology, and navigation. Course 1, differential calculus, and surveying are prerequisites.

3 or 4 units, spring quarter (TOWNLEY)
spring, 8

12. Advanced Practical Astronomy.—A continuation of course 11. Precise methods of determining time, latitude, etc., by means of the universal instrument.

Any quarter (TOWNLEY) Hours and units by arrangement

13. Adjustment of Observations.—Theory of the method of least squares, with applications. Credit in course 2 or its equivalent is a prerequisite.

3 units, winter quarter (TOWNLEY) By arrangement
winter, 1

14. Geodesy.—Study of the form and dimensions of the earth and the practical methods of geodetic work. Courses 11 and 13 are prerequisites.

3 units, autumn quarter (TOWNLEY) By arrangement

15. History of Astronomy.—A rapid survey of the progress of astronomy from the time of the Greeks to the present. Course 10 is a prerequisite.

4 units, winter quarter (TOWNLEY)
winter, 14

16. Variable Stars.—Consideration of the different classes of variable stars, methods of observation and construction of light curves. Course 10 is a prerequisite.

3 units, spring quarter (TOWNLEY)

BACTERIOLOGY AND EXPERIMENTAL PATHOLOGY

†WILFRED HAMILTON MANWARING, Professor.
EDWIN WILLIAM SCHULTZ, Assistant Professor.
WILLIAM LUDLOW HOLMAN, Acting Assistant Professor.

NON-MEDICAL COURSES

A. Hygiene of the Infectious Diseases.—Non-technical lectures in Elementary Bacteriology, with special reference to the application of

† Absent on leave, 1920–21.

bacteriological methods to the control and prevention of infectious diseases. Not open to first-year students.

2 units, spring quarter (SCHULTZ) TTh 11
spring, 71

B. Anatomy and Physiology of Disease.—Non-technical lectures in Elementary Pathology. An elementary presentation of the fundamental processes in disease. Not open to first- and second-year students.

2 units, spring quarter (MANWARING) [Not given in 1920–21]

C. Anatomy and Physiology of Disease.—Non-technical lectures in Elementary Pathology, dealing with such topics as: The Nature of Disease, Curative Forces of the Body, Methods of Diagnosis, Methods of Treatment, Popular Remedies, Patent Medicines, etc. Not open to first- and second-year students.

1 unit, autumn quarter (SCHULTZ) T 11
autumn, 1; winter, 1

MEDICAL COURSES

1. Bacteriology.—Required medical course. Prerequisites: 165 units of university work (135 units for department majors), including Anatomy 1, Chemistry 16, *l, f,* Physiology 3 and 4, or equivalents.

a. General Bacteriology.

4 units winter and spring quarters (SCHULTZ, HOLMAN)
Lec. M 11, WF 1; Lab. MTTh 1–4, WF 2–4
winter (SCHULTZ), *14; spring* (HOLMAN), *43*

1a. Bacteriological Chemistry.

3 units, spring quarter (HOLMAN)
spring, 18

1b. Elective Quiz.

1 unit, winter and spring quarters
winter (SCHULTZ), *13; spring* (HOLMAN), *39*

b. Pathogenic Bacteriology.

6 units, autumn and summer quarters (HOLMAN)
autumn, 32; summer, 36

1a. Supplementary Inoculation.

2 units, autumn quarter (HOLMAN)
autumn, 13

1b. Immunity.

1 unit, autumn and *summer quarters (SCHULTZ)
autumn, 28; summer, 30

1c. Elective Quiz.

1 unit, autumn and *summer quarters (HOLMAN)
autumn, 26; summer, 28

2. Experimental Bacteriology.—Elective medical course. An advanced course in bacteriological methods, including the use of animals, special apparatus, etc. Prerequisite: course 1.

2 units, autumn quarter (HOLMAN) [Not given in 1920–21]

2a. Supplementary Inoculation.
2 units, autumn quarter (HOLMAN)

2b. Immunity.
1 unit, autumn quarter (SCHULTZ)

2c. Elective Quiz.
1 unit, autumn quarter (HOLMAN)

3. Principles of Immunity.—Elective medical course. An advanced course of lectures on immunity and serologic methods. Prerequisite: course 1.
4 units, autumn quarter (SCHULTZ) [Not given in 1920–21]

3a. Elementary Serology.—Elective medical course. A laboratory study of antitoxins, bacteriolysins, hemolysins, agglutinins, precipitins, opsonins, complement deviation, anaphylaxis, etc., designed to accompany course 3.
6 units, autumn and summer quarters (SCHULTZ, HOLMAN) By arrangement
autumn (SCHULTZ), *3; summer* (HOLMAN), *4*

4. General Pathology (a).—Required medical course. Continuous with General Pathology (*b*), Division of Pathology, San Francisco. The course is given from the experimental point of view and covers circulatory disturbances, degenerations, pigmentations, acute inflammations, and regenerations. Prerequisite: course 1.
6 units, winter quarter (SCHULTZ) Lec. MW 1; Quiz F 1; Lab. MWF 2–4
winter, 22; summer, 17

4a. Supplementary Operation.
4 units (SCHULTZ)
autumn, 1; winter, 2; spring, 1; summer, 4

5. Histopathologic Technique.—Elective medical course.
2 units, winter quarter (SCHULTZ) By arrangement
winter, 6; summer, 1

6. Experimental Pathology.—Elective medical course. An advanced course in General Pathology, dealing with the production and study of typical pathological lesions in animals. Prerequisite: course 4.
3 to 6 units, spring quarter (SCHULTZ) [Not given in 1920–21]

7a, 7b. Pathological Physiology.—Elective medical course. Designed to accompany the introductory course in Physical Diagnosis. Subject matter presented from the experimental point of view. (*a*) Winter Quarter: Cutaneous and mesoblastic sensations, skeletal muscle, circulation, respiration, digestion, and absorption. (*b*) Spring Quarter: Metabolism, internal secretion, heat regulation, excretion, reproduction, special senses, psychical processes.
2 units, winter and spring quarters (MANWARING) [Not given in 1920–21]

8. Experimental Functional Pathology.—Elective medical course. A series of ten kymograph experiments on dogs; the production and study of typical pathological physiological conditions. Prerequisite: course 7*a*.

3 units, spring quarter (MANWARING) Lab. Th.8–12 [Not given in 1920–21]

9. Protozoölogy.—Elective medical course. The course includes a study of (1) the biology of protozoa; (2) typical free-living species; (3) species parasitic in animals; (4) species parasitic in man. The chief portion of the course is devoted to the species pathogenic for man; diseases produced by them, and to the prevention and control of protozoan infections. Methods of collecting, cultivating, and preparing for study both free-living and parasitic protozoa are also covered. Prerequisites: 120 units of university work, including Zoology 1, Anatomy 1, Physiology 3, and Chemistry 10, or equivalents.

6 units, spring quarter (SCHULTZ) [Not given in 1920–21]

10. Helminthology.—Elective medical course. A study of the parasitic worms, with special reference to those pathogenic for man. Prerequisite: course 9.

2 units, autumn quarter (SCHULTZ)
Lec S 9; Lab. S 10–12 [Not given in 1920–21]

11a, 11b. Clinical Laboratory Methods.—Elective for department majors. Full-time work in either (*a*) the Bacteriological, or (*b*) the Clinical Laboratories, Lane Hospital, San Francisco. Prerequisites: courses 1, 2, 3, 3*a*, 5, 9, 10. Limited to two students each quarter.

13 units, any quarter (DICKSON, WYCKOFF) Lab. MTWThF 9-12, 2–5, S 9–12
autumn, 1; winter, 1; spring 1

12. Journal Club.—Elective medical course. A study of current literature in the subjects covered by the department, with oral or written reports at one or more of the weekly meetings. The work is done under the staff member in charge of the particular field in which the student is interested. Prerequisites: course 1, 3, 3*a*, 4, and 9.

2 units, autumn, winter, or spring quarter (SCHULTZ, HOLMAN) By arrangement
autumn, 2; summer, 9

13. Advanced Work, Medical Thesis, Research.

(*a*) Bacteriology. (HOLMAN.)

(*b*) Experimental Histopathology, Parasitology. (SCHULTZ.)

(*c*) Experimental Functional Pathology, Serology. (MANWARING.)

5 to 10 units, winter or spring quarter By arrangement
autumn, 3; winter, 3; spring, 5; summer, 1

FEES.—Course 1, $30; course A, 3*a*, 4, and 9, $15 each; courses 6 and 8, $10 each; courses 5 and 10, $5 each. Students pay for breakage and animals used.

LOWER DIVISION PREREQUISITES.—The completion of the following Lower Division courses, or their equivalents: Physics 1*a*, 1*b*, 1*c*;

Chemistry 1, 3, 2, *a*, *b*, *d*, *f* (if possible); Botany 1*c* (if possible); Zoology 1 (or General Biology 1, 2, *a*), 11; reading knowledge of French or German.

Recommended Departmental Curriculum.—Third Year: Chemistry 7, 8, *e* (or 10*), Anatomy 1, Physiology 3, 4, Bacteriology 9, or equivalents. Fourth year: Chemistry 16*, *l**, Bacteriology 1, 2, 3, 3*a*, 5, 10, 11 (or 13), 12, or equivalents. Recommended electives: Chemistry (Water analysis), Economics 23.

Advanced Degrees.—Applicants for the degree of Master of Arts in Bacteriology and Experimental Pathology will be expected to complete in addition to the requirements for the Bachelor's degree, the equivalent for forty-five units work in the University, of which approximately two-thirds must be in the Department. The departmental work will include a thesis based on laboratory work, and courses 3, 3*a*, 9, 10, and 12, if not included in the undergraduate work. Course 11*a* or 11*b* may be substituted for 13 units of the departmental requirements.

Candidates for the degree of Doctor of Philosophy in Bacteriology and Experimental Pathology, after the completion of the equivalent of the requirements for the Master of Arts, will follow such courses as are approved by the Department, subject to general University regulations.

BIBLICAL HISTORY AND LITERATURE

David Charles Gardner, Chaplain, Lecturer.
Augustus Taber Murray (Department of Greek).
Henry David Gray (Department of English).

1. English Bible.—Representative portions of the Bible studied as literature. Not open to first-year students. [English 24.]

3 units, autumn quarter (Gray) MWF 10
autumn, 22

2. New Testament Literature.—A critical introduction to the literature of the New Testament for general students; no knowledge of Greek is presupposed. Lectures with assigned readings. [Greek 20.]

3 units, autumn quarter (Murray) MWF 9

3. The Religion of the Jew.—A study of Old Testament religion and ethics.

1 unit, autumn quarter (Gardner) Th 11
autumn, 43

* Summer quarter.

4. Life of Christ.—A history of the life and times of Jesus. Lectures, discussions, and papers.

1 unit, winter quarter (GARDNER) Th 11
winter, 33

5. The Ethics of Christ.—An analysis of Christian Ethics as disclosed in the Gospels. The application of Christ's teaching to modern life.

1 unit, spring quarter (GARDNER) Th 11
spring, 33

BIOLOGY

General Biology.—This course attempts to present to beginners by means of lectures, illustrations, demonstrations, and laboratory exercises the fundamentals of Biology in its broadest sense. It includes a study of: (1) Protoplasm, the common living substance of all plants and animals; (2) The organization of cells and their combination into multicellular organisms; (3) The role of green plants in the manufacture of foods; (4) The transformation of foods into the living substance of plants and animals; (5) The liberation and utilization of the chemical energy of foods, chiefly by animals; (6) The sensitivity of protoplasm and its role in correlationg the internal processes of the orgaism on the one hand and relating and adjusting it to its environment on the other; (7) Disease and death of organisms; (8) The enrichment of the soil through the decomposition of organic remains and nitrogen fixation; (9) The perpetuation of the species through reproduction; (10) The laws and mechanism of heredity; (11) Evolution and adaptation of organisms; (12) The factors controlling the ecological and geographical distribution of organisms; and (13) Man's place in nature. No prerequisites, and required of all Lower Division students who do not present a high-school equivalent or elect an equal amount of work in one of the biological departments. (See requirements under Biology in Announcement of Lower Division.) Nine hours, as follows:

1. Lectures.

3 units, autumn and *winter quarters (BURLINGAME, DOANE, HEATH, MARTIN, PEIRCE, WEYMOUTH, WILBUR) (autumn) MWF 8; (winter) TThS 8
autumn, 294; winter, 125

2. Lectures.

3 units, winter and *spring quarters (ABRAMS, BURLINGAME, FISHER, HEATH, MARTIN, SMITH, TERMAN, VESTAL, WILBUR) MWF 8
winter, 188; spring, 149

a. Laboratory.

3 units, autumn, *winter, and *spring quarter (VESTAL, PERRY, SPONSLER) MWF 1–4, or TTh 1–4 and S 8–11
autumn (2 sections), 58, 28; winter (2 sections), 58, 59; spring, 66

BOTANY

Douglas Houghton Campbell, Leroy Abrams, †George James Peirce, Professors.
Leonas Lancelot Burlingame, Associate Professor.
James Ira Wilson McMurphy, Assistant Professor.
L. G. M. Baas Becking, Instructor.

The Department of Botany aims to provide instruction for two classes of students: (*a*) Students who wish to know something of the structures, life processes, relationships, and uses of plants, and to gain some familiarity with the methods of scientific work; and (*b*) Professional students who look forward to investigation, teaching, or the technical applications of Botany in Plant Breeding, Forestry, Agriculture, Horticulture, Plant Pathology, etc. Courses 1*a*, 1*b*, 1*c*, which present the elements of important divisions of botanical study, are designed to meet the needs of both groups of students and must precede all other courses in the department, except in the case of students who have received equivalent credit. Courses 2 to 26 are open to students who have had courses 1*a*, 1*b*, or 1*c*, or their equivalent. It is the aim of these courses to give the student, by means of lectures and references to the literature, a general and summary account of the present state of knowledge, and in the laboratory and the field to afford him an opportunity for a personal acquaintance with plants themselves. Students who have had two or more years' work may, after consultation, be registered in courses 17, 18, 19, 20, 21. The resources of the department afford exceptional opportunity for investigation in a number of fields. Properly qualified students desiring to undertake such investigation should register in courses 22, 23, 24, 25, 26, after consultation with the instructor concerned.

Major students in the department will be expected to complete 60 units in the department, and Zoology 1. The sixty units should include courses 1*a*, 1*b*, 1*c*, 2 or 3, 4 or 5, 7 or 8, 10 or 11, and 12 or 13. It is strongly recommended that courses 2, 3, 7, and 8 be taken in the second year.

The Teacher's Recommendation in the University is based on the satisfactory completion of a minimum of two majors, or one major and two minors. A minor in Botany consists of Elementary Botany (courses 1*a*, 1*b*, and 1*c*) and one advanced course, chosen from the following: 4, 7, 8, 9, 10, 12, 13, 14, 15. A major must include the following: Elementary Botany (1*a*, 1*b*, 1*c*), General Fungi (4), General

† Absent on leave, 1920-21.

Morphology (2, 3, 7 or 8, 9), Systematic Botany (10), Physiology (12 or 13), a total of 35 units.

Students looking to Forestry or Agriculture as a profession should include courses 4, 6, 10, 11, 12, 13, 14, and 15 as part of their preparation, and the following subjects in other departments: Elementary Physics, Chemistry, Geology and Physiography, Zoology, Entomology, Economics, and Applied Mathematics. They should also be able to read French and German.

Fees are charged in the various courses approximately sufficient to cover the cost of the perishable materials and syllabus used, as follows: Courses 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 18, 19, 20, 22–26, $3.00 each; courses 4, 5, 6, 12, 13, 16, 21, $5.00 each; 14, $1.00.

1a. Elementary Botany: Morphology.—This course is designed to be a foundation course. It aims to present a comprehensive view of the entire plant kingdom from the lowest to the highest. The individual types studied will be chosen with reference to their suitability to illustrate the larger steps through which plants have passed in the course of evolution. Campbell's "A University Text-Book of Botany" is used as the principal text and should be owned by, or at least be available to, every student. References to other books will be given whenever advisable and such supplementary reference books will be kept on a shelf in the laboratory and will not be permitted to be taken from the room. The hour preceding the lecture on Tuesdays and Thursdays will be spent in the laboratory, in study and conference under supervision.

5 units, autumn quarter (Campbell, Burlingame, and Assistants)
autumn, 18 Conference TTh 1:05; Lec. TTh 2:05; Lab. MWF 1:05–3:45

1b. Elementary Botany: Systematic.—Study of the fundamental principles of plant relationships, with special reference to the higher plants. Through the study of representative species and supplementary classification, it is intended to acquaint the student with the more important families of flowering plants, and to enable him to determine independently for his own satisfaction the names and relationships of plants arousing his interest.

5 units, spring quarter (Abrams, and Assistants)
spring, 18 Lec., Lab. and Field Work MTWThF 1:05–3:45

1c. Elementary Botany: Anatomy and Physiology.—Study of the structure, mainly of the land plants, with a view to understanding the vital processes of living plants and their relations to man. The laboratory work will be supplemented by field work.

5 units, winter and summer quarters (winter, McMurphy, Becking; summer, Peirce)
Lec. TTh 1:05; Lab. MWF 1:05–3:45
winter, 14; summer, 12

2. **Fresh-Water Algae.**—Lectures, readings, and laboratory work on the morphology and classification of Blue Green and Green Algae. Prerequisite: Botany 1*a*.

5 units, winter quarter (BECKING)

3. **Marine Algae.**—Lectures, readings, and laboratory work on the morphology and classification of the Brown and Red Algae. This course is a continuation of course 2, but may be taken independently. Prerequisite: Botany 1*a*.

5 units, spring quarter (BECKING)

4. **General Fungi.**—Lectures and Laboratory work on the morphology and classification of Fungi. Prerequisite: Botany 1*a*.

5 units, winter and spring quarters (MCMURPHY)
winter, 1; spring, 3 Lec.-Lab. MTWThF 1:05–3:45

5. **Fleshy Fungi.**—Lectures, laboratory, and field work on the fleshy Fungi ordinarily known as mushrooms, toadstools, etc. Prerequisite: Botany 1*a*.

5 units, winter quarter (MCMURPHY)

6. **Plant Pathology.**—Lectures, laboratory, and field work on fungous and other plant diseases. Open only to students who have had course 4 or its equivalent.

5 units, winter and spring quarters (MCMURPHY)
winter, 8; spring, 3

7. **Bryophytes.**—Lectures and laboratory work on the special morphology and classification of the Bryophytes (Mosses). Prerequisite: Botany 1*a*.

5 units, winter quarter (CAMPBELL) [Not given in 1921–22]

8. **Pteridophytes.**—Lectures and laboratory work on the special morphology and classification of Pteridophytes (Ferns, Horsetails, Club-mosses). This course is a continuation of course 7. Prerequisites: 1*a* and 7.

5 units, spring quarter (CAMPBELL) [Not given in 1921–22]

9. **Seed Plants.**—Lectures and laboratory work on the general morphology and anatomy of Gymnosperms and Angiosperms. This course is intended to continue and round out the work of courses 2, 3, 4, 7, 8. It aims to give the student an insight into the origin and relationships of the larger groups of Seed Plants through a study of their Morphology; Embryology, and Comparative Anatomy. Prerequisite: courses 1*a* and 7 or 8.

5 units, winter quarter (BURLINGAME) By arrangement

10. **Systematic Botany.**—Study of the flowering plants with special emphasis on the more complex and difficult groups. In connection with

the course a botanical survey of the local flora will be undertaken, in which each student will choose a special problem. Course 1*b* is a pre requisite.

5 units, spring quarter (ABRAMS) By arrangement
spring, 2

11. Geographical Distribution and Forest Botany.—Study of the trees and shrubs, and the principles of geographical distribution which they illustrate. The laboratory work will be supplemented by work in the field and in the Arboretum.

5 units, autumn quarter (ABRAMS)
Lec. T 1:30; Lab. and Field Work MWThF 1:30–4
autumn, 10

12. Nutrition and Respiration.—Experimental study of these two functions, supplemented by lectures and reading. Prerequisite: 1*c* or its equivalent. Knowledge of the elements of physics and chemistry is desirable.

5 units, autumn and *summer quarters (BECKING, PEIRCE)
Lec. TTh 9; Lab. MWF 8–10
autumn (BECKING), *2; summer* (PEIRCE), *2*

13. Growth, Irritability, and Reproduction.—Experimental study supplemented by lectures and reading. Prerequisite: Course 1*c* or its equivalent. Knowledge of the elements of physics and chemistry is desirable.

5 units, winter quarter (BECKING) Lec. TTh 9; Lab. MWF 8–10
winter, 4

14. Genetics.—Lectures on Inheritance in plants, animals, and man. Prerequisite: Botany 1, Zoology 1 or General Biology.

3 units, spring quarter (BURLINGAME) MWF 10
spring, 35

15. Plant Breeding.—Garden and laboratory work illustrative of the principles and practices underlying modern practice in the propagation and improvement of plants. Prerequisite: Botany 1*a*, Zoology 1 or General Biology, Botany 14.

2 units, spring quarter (BURLINGAME)
spring, 2

16. Cytology and Technique.—1. Lectures on the structures and functions of the cell, with special reference to the mechanism of inheritance and the practical consequences thereof in plant breeding. 2. Laboratory exercises in (*a*) histological and cytological technique (killing and fixing, embedding, sectioning, staining, etc.), (*b*) study of selected slides illustrating the lecture topics, mitosis, gametogenesis, sporogenesis, etc.

3 units, autumn quarter, 5 units, winter quarter (BURLINGAME) By arrangement
autumn, 1; winter, 2

17. Advanced Plant Pathology.—Field and laboratory work on special diseases.

(McMurphy) Hours and credit by arrangement
spring, 1

18. Advanced Archegoniates.—This course offers opportunity for individual students to continue (along lines of special interest) the work begun in course 7 or 8. Prerequisites: Elementary Botany and course 7 or 8 or an equivalent.

(Campbell) [Not given in 1921–22]

19. Advanced Systematic Botany.—Special problems in taxonomy and geographical distribution, with reference to methods of investigation. This course is intended primarily as preliminary training for research work in taxonomic botany.

(Abrams) Hours and credit by arrangement
autumn, 2; winter, 5; spring, 3

20. Problems in Genetics and Plant Breeding.—This course offers an opportunity to continue advanced work along the lines of course 15.

Any quarter (Burlingame) By arrangement
spring, 3

21. Advanced Physiology.—Experimental study of a single problem by one or more individuals. Prerequisites: Elementary Botany and courses 12 and 13, or their equivalents.

Any quarter (Becking) By arrangement
autumn (Becking), *6; summer* (Peirce), *2*

22. Research in Morphology.—Students desiring to do original investigation in morphology must have had adequate training in the appropriate special morphology courses or their equivalents.

(Campbell) [Not given in 1921–22]
autumn, 1

23. Research in Plant Pathology.

(McMurphy) By arrangement

24. Research in Taxonomy and Geographical Distribution.

(Abrams) By arrangement

25. Research in Cytology and Genetics.—For students who wish to undertake original work in genetics or cytology. Prerequisites are an adequate training in general botany and such special courses as the nature of the work makes necessary.

Any quarter (Burlingame) By arrangement

26. Research in Physiology.

(Becking, Peirce)
winter (Becking), *7; summer* (Peirce), *2*

Arboretum

The Arboretum, established by Senator Stanford prior to the opening of the University, covers approximately 200 acres and contains a large variety of conifers as well as many trees and shrubs of other species.

In 1916 it was made an integral part of the Department of Botany, and plantings and replacements were begun with a view to bringing together not only a large variety of exotic species, but also a comparatively complete collection of the trees and shrubs native to western North America.

GENERAL BIOLOGY

1. Lectures.

3 units, autumn and *winter quarters (Burlingame, Doane, Heath, Martin, McMurphy, Peirce, Weymouth, Wilbur) (autumn) MWF 8; (winter) TThS 8

2. Lectures.

3 units, winter and *spring quarters (Abrams, Burlingame, Fisher, Heath, Martin, Smith, Terman, Vestal, Wilbur) MWF 8

a. Laboratory.

3 units, autumn, *winter, and *spring quarters (Vestal, and Assistants) MWF 1:05–4:05, or TTh 1:05–4:05 and S 8–11

CHEMISTRY

John Maxson Stillman, Professor Emeritus.

Robert Eckles Swain, Edward Curtis Franklin, Lionel Remond Lenox, John Pearce Mitchell, Julius Stieglitz (Summer Quarter), Stewart Woodford Young, Professors.

‡Albert F. O. Germann, William Henry Sloan, Assistant Professors.

Alice Ruth Berger, Florian A. Cajori, Frederick John Gross Hicks, ‡Charles Doak Lowry, George Sutton Parks, Norris Watson Rakestraw, ‡John Russell, Instructors.

William Richmond Barber, Marguerite Eiskamp, Milan Wayne Garrett, Alanson Wood McDermoth, Teaching Fellows.

I. Lecture Courses

1. General Inorganic Chemistry.—Comprising a systematic treatment of elementary principles and of the properties of the more important elements and their compounds. Open to all students. Three lectures and one recitation period each week. Students with entrance credit in Chemistry are excused from the recitation period. Students without entrance credit in Chemistry are required to enroll in laboratory course *a* concurrently.

3 units, autumn and winter quarters (Mitchell, Hicks, Rakestraw) (autumn) Lec. MWF 8, Rec. F 10; (winter, Hicks) Lec. TThS 8, Rec. F 10
autumn (2 sections), 167, 76; winter, 93

3. General Inorganic Chemistry.—Continuation of Chemistry 1. Open

‡ Beginning with the academic year 1921–22.

to students who have had courses 1 and *a*, or their equivalents. (Entrance credit in Chemistry is equivalent to course *a*.)

3 units, winter and spring quarters (winter, MITCHELL; spring, HICKS) MWF 8; TThS 8
winter (2 sections), 130, 107; spring, 123

4. General Inorganic Chemistry.—Combination of Chemistry 1 and 3. Open to all students in the summer quarter.

6 units, summer quarter (HICKS) MTWThFS 8
summer, 89

5. Principles of Inorganic Chemistry.—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Prerequisite: Chemistry 3 or 4, or an equivalent.

4 units, autumn quarter (SWAIN) MTWF 11
autumn, 70

6. Principles of Inorganic Chemistry.—A continuation of Chemistry 5, although the treatment is such as to make it possible for students to take this course in advance of Chemistry 5. Work based largely on the periodic classification of the elements, including a discussion of atomic structure, and radioactivity. Prerequisite: Chemistry 3 or 4, or their equivalent.

4 units, spring quarter (SWAIN) MTWF 11
spring, 55

7. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed courses 5 and 6 or their equivalent.

5 units, autumn quarter (FRANKLIN) MTWThF 10
autumn, 67

8. Organic Chemistry.—Continuation of Chemistry 7.

5 units, winter quarter (FRANKLIN) MTWThF 10
winter, 53

9. Advanced Organic.—Advanced topics in organic chemistry, including stereochemistry. Open to students who have completed courses 5–6, and 7–8.

3 units, spring quarter in alternate years (FRANKLIN) [Not given in 1920–21]

10. Elementary Organic Chemistry.—A condensed course in organic chemistry is offered particularly for students in medicine, but open to all students who have completed course *d*. Brief course, not for Chemistry majors.

5 units, spring and *summer quarters (spring, GARRETT) MTWThF 8; (summer, STIEGLITZ) MTWThF 10
spring, 40; summer, 13

11. Chemical Calculations.—Consists of a series of problems designed to review the fundamental principles of analytical and theoretical chemistry. Open to juniors and seniors who have had courses 5, 6, and *f*. A series of more advanced problems will be given by arrangement.

3 units, spring quarter (MITCHELL) MWF 8
spring, 35

13. General Physical Chemistry.—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed Chemistry 5, 6, 7, 8, and *f*, course 7 or 5 in Mathematics, and courses 1*a*, 1*b*, 1*c*, in Physics, or their equivalent.

5 units, autumn quarter (YOUNG) MTWThF 8
autumn, 45

14. General Physical Chemistry.—Continuation of Chemistry 13.

5 units, winter quarter (YOUNG) MTWThF 8
winter, 41

15. Electro-Chemistry.—Discussion of the general theories and applications of electro-chemistry. Open to seniors in Chemistry, and to others who have completed courses 13 and 14, or their equivalent.

3 units, spring quarter (PARKS) MWF 11
spring, 28

16. Physiological Chemistry.—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products. Open to students who have completed courses 7 and 8, or 10

5 units, autumn and *summer quarters (SWAIN) MTWThF 8
autumn, 55; summer, 30

17. Seminary in Chemistry.—Discussion of assigned topics in theoretical and general chemistry. Open to graduate students and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry.

1 unit, every quarter (FRANKLIN, SWAIN) W 4
autumn, 39; winter, 34; spring, 34; summer, 25

18. Theory of Valence and Chemistry of the Higher Order Compounds.

3 units, spring and *summer quarters (HICKS) MWF 9
spring, 7; summer, 19

19. Special Topics in Organic Chemistry.—An advanced lecture course dealing with the electron theory of valence as applied to organic compounds, tantomerism, molecular rearrangement, theory of dyes, synthetic drugs, and similar types.

2 units, summer quarter (STIEGLITZ) TTh 4:05
summer, 29

20. Qualitative Analysis.—Lecture course in connection with laboratory course *d*. Open to students who have completed courses 3 or 4, and *b* or *c*.

1 unit, autumn, *winter, and *spring quarters (LENOX) TTh 1:05
autumn, 49; winter 33; spring, 43

21. Quantitative Analysis.—Lecture course. Must be taken in conjunction with course *f*.

1 unit, autumn, *winter, *spring, and *summer quarters (SLOAN, RUSSELL, BARBER) TTh 3:05
autumn, 28; winter, 30; spring, 29; summer, 9

22. Quantitative Analysis.—Lecture course. Must be taken in conjunction with course *g*.

1 unit, autumn, *winter, and *summer quarters (Sloan) WF 3:05
autumn, 27; winter, 17; summer, 13

II. Laboratory Courses

a. Elementary Inorganic Chemistry.—In connection with course 1. Illustrating fundamental laws and principles of elementary chemistry. Required of students who have not received entrance credit in Chemistry.

3 units, autumn and *winter quarters (Mitchell, Hicks, Rakestraw, Eiskamp, McDermoth) MTW 1–4, or ThF 1–4, and S 9–12
autumn, 53; winter, 22

b. General Inorganic Chemistry.—Inorganic preparations and general chemistry. For students with entrance credit or Chemistry *a*.

3 units, every quarter (Mitchell, Hicks, Rakestraw, Eiskamp, McDermoth) MTW 1–4, or ThF 1–4, and S 9–12
autumn, 104; winter, 121; spring, 56; summer, 44

c. General Inorganic Chemistry.—Combination of *a* and *b*. Open to all students in the summer quarter.

5 units, summer quarter (Rakestraw) 5 afternoons
summer, 17

d. Qualitative Analysis.—Open to students who have completed courses 3 or 4, and *b* or *c*. Given in conjunction with course 20.

5 units, autumn, *winter, and *spring quarters (Lenox, Berger) 5 afternoons
autumn, 48; winter, 33; spring, 44

e. Organic Preparations.—Preparation of typical carbon compounds. Open in connection with courses 7 and 8 to students who have completed course *d*.

5 units, winter, *spring, and *summer quarters (Franklin, Garrett)
winter, 18; spring, 27; summer, 3 5 afternoons

f. Quantitative Analysis.—Introductory. Training in manipulation in gravimetric and volumetric methods. Open to students who have completed course *d*. First-year students are admitted to this course only in case they have completed course 5, in addition to *d*. Given in conjunction with course 21.

5 units, autumn, *winter, *spring, and *summer quarters (Sloan, Parks, Barber) 5 afternoons
autumn, 24; winter, 27; spring, 23; summer, 9

g. Quantitative Analysis.—An introductory course in quantitative methods with emphasis on volumetric work. Not open to chemistry majors. Given in conjunction with course 22. Same prerequisites as course *f*.

4 units, autumn, *winter, and *summer quarters (Sloan, Parks, Barber)
autumn, 26; winter, 13; summer, 12 4 afternoons

h. Quantitative Analysis.—A continuation of course *f*, principally gravimetric methods.

5 units, autumn, *winter, and *summer quarters (Sloan, Parks, Barber) 5 afternoons
autumn, 17; winter, 10; summer, 3

i. Advanced Quantitative Analysis.—Systematic mineral analysis and volumetric assays of ores of copper, lead, zinc, iron, and manganese. Iron and steel analysis and the analysis of ferro-alloys. Open to students who have completed courses *f* and *h* and required of all students registering in division B (Analytical Chemistry).

Students majoring in other departments, who have completed course *f* in Chemistry, may register for three units of work in this course, covering the volumetric portion only.

3 or 5 units, spring quarter (Lenox, Berger) 3 or 5 afternoons
spring, 7

k. Physical-Chemistry Measurements.—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking courses 13–14, and who have completed courses 7, 8, *e*, and *f*. In special cases and by special arrangement this course will be open to students who have completed courses 7, 8, *e*, and *f*, but have omitted courses 13–14.

5 units, autumn, *winter, and *spring quarters (Young, Parks) 5 afternoons
winter, 9; spring, 6

1. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them; followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. The latter half of the course is devoted to quantitative analytical methods. In connection with course 16.

4 or 5 units, autumn and *summer quarters (Swain, Cajori) 4 or 5 afternoons
autumn, 56; summer, 17

x. Advanced and Special Courses.—Advanced and Special Courses in laboratory work and research work are open to students who have completed the necessary prerequisites, by arrangement with professors of the department, and with reference to the particular aims and ambitions of the students. Such advanced or special subjects are, for example: special methods in mineral analysis; water analysis; urine and blood analysis; elementary organic analysis; special organic preparations.

(Autumn, Swain, Franklin, Young, Sloan; winter, Franklin, Young, Cajori, Hicks; spring, Swain, Franklin, Young, Hicks; summer, Cajori, Hicks, Sloan, Swain, Young)
autumn, 30; winter, 25; spring, 31; summer, 24

Candidates for the degree of Bachelor of Arts in Chemistry must offer the equivalent of two years of college work in German, or two years of French and one year of German. The election of German

in the Lower Division is advised for those who have not had the equivalent of two years of college work in the subject. A good reading knowledge of German is required for all advanced degrees.

Major students should complete the courses in one of the following curricula (A, B, C, or D) in meeting the requirements for the degree of Bachelor of Arts in Chemistry.

The schedules of courses outlined below apply to students who began their university work after October 1, 1920. Students of two or more years undergraduate standing will be expected to complete the requirements as laid down at the time they entered the University for the particular course they are following. See *Announcement of Courses* for previous years.

Qualified students may also pursue investigations of problems in inorganic, organic, physical, analytical, or physiological chemistry under the direction of any professor with whom arrangement is made.

For all such advanced, special, or research work, students will register and enroll under *x*, giving the name of the professor under whom the work is to be carried on, and for such number of units of credit as may be agreed upon.

Students intending to major in the Department of Chemistry are advised to offer entrance credit in chemistry, physics, mathematics (including solid geometry and trigonometry for the chemical engineering course), and German (2 units). Entrance credit in biological science will also be advantageous. Students without these entrance credits may experience some difficulty, especially in the chemical engineering course, in conforming to the Departmental requirements for graduation. Consult also the *Registration Manual for the Lower Division.*

A. General Chemistry

(Recommended for all who are studying the science of chemistry particularly as a basis for teaching or scientific research.)

First and Second Years—Lower Division requirements, including Chemistry 1, 3, (*a*), *b*, 20, *d*; Physics 1*a*, 1*b*, 1*c*; Mathematics 7, or its equivalent; and German or French.

Third and Fourth Years.—Chemistry 5, 6, 7, 8, 13, 14, 21, *e*, *f*, *k* or *x*.

B. Analytical Chemistry

(Particularly adapted to meet the needs of students who are looking forward to the career of analytical chemist.)

First and Second Years.—Lower Division requirements, including Chemistry 1, 3, (*a*), *b*, 20, *d*; Physics 1*a*, 1*b*, 1*c*; Mathematics 7 or its equivalent; and German or French.

THIRD AND FOURTH YEARS.—Chemistry 5, 6, 7, 8, 13, 14, 21, *e*, *f*, *h*, *i*, *k* or *x*; Mineralogy 1.

C. BIOLOGICAL CHEMISTRY.

(Particularly adapted to students who are looking forward to work along biochemical or medical lines.)

FIRST AND SECOND YEARS.—Lower Division requirements, including Chemistry 1, 3, (*a*), *b*, 20, *d*; Physics 1*a*, 1*b*, 1*c*; Mathematics 7 or its equivalent; and German or French.

THIRD AND FOURTH YEARS.—Chemistry 5, 6, 7, 8, 16, 21, *e*, *f*, *l*, *k*, or *x*; Physiology 2; Bacteriology A or 1.

D. CHEMICAL ENGINEERING

(Intended especially for students who are working toward the degree of Engineer in Chemical Engineering, and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.)

This curriculum comprises four years of the necessary six years' work leading to the advanced degree of Engineer in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry, upon completion of the following requirements:

FIRST AND SECOND YEARS.—Lower Division requirements, including Chemistry 1, 3, (*a*), *b*, 20, *d*; Physics 2*a*, 2*b*, 2*c*; Applied Mathematics 1*a*, 1*b*, 2*a*; Engineering 1, 2.

THIRD AND FOURTH YEARS—Chemistry 5, 6, 7, 8, 13, 14, 21, *e*, *f*, *h*; Applied Mathematics 2*b*, 3*a*, 3*b*; Engineering 3, 10, 11, 12; Mechanical Engineering 12.

ADVANCED DEGREES

After October 1, 1926, the degree of Engineer in Chemical Engineering will be granted only upon the completion of two years of graduate work in addition to the above requirements for the A. B. degree as given under Curriculum D. This work will include a thesis based on laboratory work and the following courses: Chemistry 9, 17, *k*; Mechanical Engineering 21, 23, 32, 33, 36; Electrical Engineering 2, 3, 22, 23. A reading knowledge of both German and French will also be required.

Prior to October 1, 1926, this degree will be awarded upon the completion, in addition to the requirements for the A. B. degree in Chemical Engineering, of three quarters of graduate work, which shall include the following courses: Chemistry *k*, Mechanical Engineering 21, 23, 36, and a thesis based on laboratory work.

Applicants for the degree of Master of Arts in Chemistry will be expected to complete, in addition to the requirements for the Bache-

lor's degree, the equivalent of forty-five units of work in the University—of which approximately two-thirds must be in the department. This work will include a thesis based on laboratory work, and courses 13, 14, and *k*, if these were not included in the undergraduate work.

Candidates for the degree of Doctor of Philosophy in Chemistry, after the completion of the equivalent of the requirements for the degree of Master of Arts or Engineer, will follow such courses as are approved by the department faculty, subject to general University regulations.

The Teacher's Recommendation.—The minimum requirements for the high school teacher's recommendation in Chemistry are as follows:

a. To teach chemistry as a minor high-school subject: Courses 1, 3, or 4, *b* (General Inorganic lectures and laboratory); 20, *d* (Qualitative Analysis); 5, 6 (Principles of Chemistry); and either 7 or 10 (Organic Chemistry). Total, 27 units.

b. To teach chemistry as a major high-school subject: Courses 1, 3, or 4, *b* (General Inorganic lectures and laboratory); 20, *d* (Qualitative Analysis); 21, *f* (Quantitative Analysis); 5, 6 (Principles of Chemistry); 7, 8 (Organic Chemistry). Total, 37 units.

Laboratory Fees.—A charge of $25 per quarter ($10 of which is returnable less bills for breakage and loss of apparatus) is made to students in courses *a*, *b*, and *c*; for three units credit in Chemistry *i* or *x* the fee is $20 per quarter (with $10 returnable less breakage); for all other courses of not more than six units credit the fee is $30 per quarter (of which $15 is returnable less bill for breakage and loss of apparatus).

ECONOMICS

Murray Shipley Wildman, Walter Greenwood Beach, Eliot Jones, Albert Conser Whitaker, Professors.

Eliot Grinnell Mears, Acting Professor.

John Bennet Canning, Assistant Professor.

Margaret Mulford Lothrop, Nathaniel Sanders, Instructors.

Francis W. Hirst, Lecturer.

Charles H. Titus, Clinton Fisk Wells, Lucy Burton Winsor, Assistants.

Nature and Purpose.—The courses offered in this department are not confined to the subject of Economics as properly defined, but include a number of topics often given in departments of sociology and schools of commerce. In the conduct of all the courses, however, the economic

factors are emphasized and their importance to our social institutions is developed. The primary purpose of the instruction is to discover the elements of sound public policy rather than to train for a vocation in the narrower sense.

GRADUATION.—To arrange a program of study leading to the degree of Bachelor of Arts in Economics a student should consult with his departmental adviser in order that his program of work may be adapted to his special needs or interests. In making such a program at least a fourth of the required 180 units should be selected from courses offered in this department, and at least a third of these should be advanced courses.

In addition to courses given in this department, certain others offered in Political Science, History, Law, and Philosophy, will be found helpful and should be included in the student's program.

Course 1 (Economic Problems) and course 51 (Principles of Economics) are required of all candidates for graduation in Economics.

TEACHER'S CERTIFICATE.—To obtain a teacher's certificate with the major subject in this department, a student will be required to secure credit for 45 units of work in Economics. For a certificate with a minor in this department, credit for 25 units is required.

JOURNALISM.—Students, majors in this department, who desire to prepare for journalism are referred to the announcement on page 191.

COURSES OPEN TO LOWER DIVISION STUDENTS

1. Economic Problems (Citizenship).—This is an elementary study of problems involving the production, exchange, and use of wealth. An attempt will be made to give the student an approach to the economic issues of the day with an intelligent appreciation of the factors which make for sound public policy. Primarily for first-year students.

4 units, autumn, *winter, *spring, and *summer quarters (WILDMAN, JONES) MTWTh 10
autumn, 221; winter, 211; spring, 178

2. Social Problems (Citizenship).—This is an elementary study of the problems that arise out of the relations of people to each other as these relations express themselves in such important institutions as the family, state, and church. It will be the purpose of the course to give the student criteria for intelligent criticism of legislation and practice. Primarily for first-year students.

4 units, autumn, *winter, and *spring quarters (BEACH) MTWTh 10
4 units, summer quarter (WILDMAN, LOTHROP)
autumn, 252; winter, 261; spring, 259; summer (WILDMAN), *279*, (LOTHROP), *22*

3. Elementary Accounting.—Development of accounting; theory of debit and credit; bookkeeping forms and practice; preparation of bal-

ance sheets and their interpretation; application of theory and principle to simple systems of accounts; practical accounting problems. No prerequisites. This course should be taken by students expecting to enter courses 20 and 59.

3 units, autumn, winter, spring, and summer quarters (CANNING, TITUS) MWF 8
autumn (2 sections), 41, 39; winter, 43; spring (2 sections), 41, 21; summer, 28

4. Elements of Economics.—A general and introductory course for third- and fourth-year students from other departments. This course is not adapted to majors in economics.

3 units, autumn and *spring quarters (LOTHROP) MWF 9
autumn, 39; spring, 16

5. Railway Transportation.—Historical account of railroad transportation; development of railroad systems; state and federal legislation; decisions of the commissions and of the courts; government ownership and operation. Prerequisite: course 1. Not open to first-year students.

5 units, autumn quarter (JONES) MTWThF 8
autumn, 207

6. Introduction to Statistics.—A study of elementary statistical methods appropriate for dealing with problems in the social sciences and business. Emphasis will be given to the critical examination of data, to the defining of statistical units, to the theory of classification, to the properties and appropriate uses of the commoner averages and to the determination and interpretation of index numbers.

4 units, summer quarter (CANNING) MTWTh 8
summer, 8

7. Financial History of the United States.—A general historical survey of the financial policy of the national government with special emphasis on the Revolution, Civil War, and recent periods. The subject matter of the course includes the tariff, the internal revenue system, public finances in time of war, the public land policy, the growth of public expenditures, management of the public debt, and treasury administration.

4 units, summer quarter (WINSOR) MTWTh 11
summer, 35

8. Economic Resources of the United States.—A lecture and reading course on the economic resources of the United States, with some attention to the problems of conservation and public control. This course should be taken as prerequisite to 66.

4 units, winter quarter (MEARS) TWThF 11
winter, 180

10. Accountancy of Investment.—Methods of valuing income-bearing properties and securities on the basis of a rate of interest, and of find-

ing the rate of interest yielded on investments. Depreciation and sinking funds. The student's work will consist largely in the solution of assigned problems. Advanced mathematics not required.

4 units, autumn and *spring quarters (WHITAKER) MTWTh 11
autumn, 75; spring, 75

[**Business Law.**—See course 49 in Law School.]

INTERMEDIATE COURSES

[The following courses are primarily for students who have more than forty units of university credit.]

20. Corporation and Trust Finance.—Elementary survey of corporation law; the organization and management of corporations and combinations; the corporation's securities, stocks and bonds, and their classification; the stock market and stock speculation; capitalization, surplus, reserve, and financial policy; the provision of new capital; promotion, underwriting, receiverships and reorganization.

4 units, winter quarter (WHITAKER) MTWTh 10
winter, 147

21. Public Finance.—A general course dealing with the history and theory of public expenditures, national, state, and local budgets, methods of securing efficiency in the disbursements of public moneys, public debts, and war finance.

4 units, winter and *summer quarters (WINSOR) TWThF 10
winter, 44; summer, 24

22. Labor Problems.—A general course. The topics considered include the following: the rise of the wage-earning class, the industrial revolution, unemployment, woman and child labor, wages, and collective bargaining.

3 units, winter quarter (BEACH) MWF 9
winter, 109

23b. Social Agencies.

4 units, summer quarter (LOTHROP) MTWTh 11
summer, 25

24. Economics and the Home.—The problems of the household as a factor in the consumption of wealth. Not open to first-year students.

3 units, winter quarter (LOTHROP) [Not given in 1920–21]

26. Money and Credits.—The elements of monetary theory; the laws of coinage, legal tender, and credit; the standard of value, price movements and their relation to prosperity.

3 units, autumn quarter (WILDMAN) MWF 8
autumn, 133

27. Insurance.—The social and individual problems of economic insecurity; the development of forms of insurance to deal with them; out-

lines of the principles of the major commercial branches of insurance; problems of state control and participation.

4 units, winter quarter (CANNING) MTWTh 9
winter, 16

28. Foreign Trade.—A study of the methods used by different nations in developing foreign markets; the methods of financing foreign shipments; the export and commission houses; international chambers of commerce.

4 units, spring quarter (MEARS) MTWTh 11
spring, 157

29. Intermediate Accounting.—The principles of accounting common to all systems of accounts in acquisitive enterprise, developed by discussion of the information needed by the various interested persons, e. g., the stockholder, the director, the manager, the creditor, etc. Problems illustrative of theory of accountancy and problems of interpreting financial statements constitute a major portion of the work. Prerequisite: course 3 or its equivalent. Limited to forty.

4 units, autumn and *summer quarters (CANNING) MTWTh 9
autumn, 43; summer, 12

30. Water Transportation.—Historical account of ocean transportation; decline of the American merchant marine engaged in foreign trade explained; necessity of a merchant marine considered; means of establishing a merchant marine analyzed; experience of foreign nations; combination movement in shipping and shipbuilding in United States; Panama Canal; effect of the war; federal legislation; future of American merchant marine. Not open to first-year students.

4 units, spring quarter (JONES) MTWTh 8
spring, 177

31. Business Administration.—An introduction to the problems of modern business enterprise; industrial location and plant location; the functions of the administrator in correlating departments and promoting efficiency and coöperation of personnel; business ethics in relationships internal and external to the enterprise.

4 units, autumn quarter (CANNING) MTWTh 11
autumn, 97

ADVANCED AND GRADUATE COURSES

[The courses which follow are not open to any students with less than 80 units of university credit.]

50. Railway Problems.—A study, from the viewpoint of public policy, of the problems that arise in connection with government regulation and government ownership. Prerequisite: course 5.

2 units, winter quarter (JONES) MW 8
winter, 66

51. Principles of Economics.—A review of the principles of economics. Required of economics majors and open only to them and to graduate students of other departments.

4 units, autumn quarter (JONES) MTWTh 10
autumn, 116

52. Banking.—The organization of American credit institutions under the Federal Reserve Act, and a comparison between American and European practice.

3 units, spring (1921) and summer (1922) quarters (WILDMAN) MWF 8
spring, 153

53. Prevention of Poverty.—A study of the factors causing poverty, crime, disease, and mental defectiveness, as evidences of social maladjustment; a survey of the possible means of prevention and of the social agencies attempting such work, with special reference to California. Trips of inspection will be included.

4 units, spring quarter (LOTHROP) MTWTh 11
spring, 26

54. Care of Dependents.—A study of the problems of the care of dependents and defectives in institutions and in their homes, with special reference to conditions in California. Three trips of inspection will be required.

4 units, summer quarter (LOTHROP) MTWTh 11

55. Crime as a Social Problem.—A study of the problems of crime: the criminal and his characteristics, the treatment of the criminal, the causes and the prevention of crime, with special reference to conditions in California. Three trips of inspection of institutions will be required.

4 units, autumn quarter (LOTHROP) MTWTh 11
autumn, 26

56. Foreign Exchanges.—A study of the system of settling international indebtedness; principles and practice of exchange banking; money markets of the world and their relations. Domestic exchange will also be considered.

4 units, autumn and *spring quarters (WHITAKER) .... MTWTh 10
autumn, 41; spring, 71

57. Railway Administration.—A study, from the viewpoint of the railroad executive, of railway organization, operation, traffic, finance, accounts, and rates. Prerequisite: course 5. Best preceded by courses 3 and 20.

2 units, winter quarter (JONES) TTh 8

58. Investments.—A study of the issues of national, state, and municipal governments, of railway, industrial, and irrigation companies from

the investor's point of view, and the organization and methods of bond and brokerage houses.

3 units, summer (1921) and *spring (1922) quarters (WILDMAN) MWF 8
summer, 45

59. Advanced Accounting.—The course recognizes two classes of students: (1) those who intend to become professional accountants; (2) those who have chosen a future occupation and desire a knowledge of its accounting problems. The work will be developed in a series of problems in various specialized systems of accounts. An effort will be made to accommodate the subject matter to the needs of the class. Prerequisite: course 29 or its equivalent.

4 units, winter quarter (CANNING) MTWTh 11
winter, 14

60. Valuation.—The valuation of the properties of public service companies for the purposes of the regulation of rates, with an introductory study of relevant parts of the theory of value and of interest. Courses 10 and 20 should precede course 60.

4 units, winter quarter (WHITAKER) MTWTh 11
winter, 12

62. Psychological Aspects of Sociology.—This course is a study of the organization of society from the point of view of mental interrelationships of society and the individual. Problems of association, leadership, conflict, coöperation, the formation of public opinion, and social progress will be considered. An elementary knowledge of sociology and psychology is assumed.

3 units, autumn quarter (BEACH) MWF 9
autumn, 41

63. Immigration.—A general introduction to the study of immigration, but with special reference to the composition of the American population and to the economic and social problems involved in the mingling of peoples, of standards, and of cultures in the United States.

3 units, spring quarter (BEACH) [Not given in 1920–21]

64. Europe After the War.—A course of lectures dealing with financial conditions in Great Britain and Europe, or the political economy of war with special reference to its after effects on credit, taxation, trade, currency, and prices.

1½ units, summer quarter, second half (HIRST) By arrangement
summer, 78

65. Teachers' Course.—Designed for students preparing to teach the commercial subjects. Credit for this course is not accepted in fulfillment of the departmental requirements for graduation, but may count as part of the university requirement for the degree. Prerequisites: Economics AI, AII, AIII, and 3, or their equivalent.

3 units, winter quarter (SANDERS)
winter, 11

66. Marketing.—An analysis of the fundamental problems involved in the distribution of commodities from producers to consumers; the functions assumed by various agencies; the features peculiarly applicable to raw materials and foodstuffs, and to manufactured products; coöperative marketing systems, notably the producer type developed in California.

4 units, spring quarter (MEARS) MTWTh 10
spring, 46

67. Social Investigation.—A simple study will be undertaken, either by the class as a whole or as individuals, which will involve practice in the preparation of a questionnaire, the collection and tabulation of data, the simpler forms of statistical and graphical presentation. Of value to those interested in labor problems as well as to those interested in social work.

autumn quarter (LOTHROP) By arrangement

67a. Social Investigation Seminar.

2 units, summer quarter (LOTHROP)
summer, 1

68. Seminar in Labor.—This seminar is designed for advanced students.

spring quarter (BEACH) By arrangement
spring, 15

69. Seminar in Transportation.—This seminar is designed for advanced students.

spring quarter (JONES) By arrangement
spring, 6

70. Graduate Seminar.—Open only to candidates for higher degrees and members of the department.

autumn, winter, and spring quarters (WILDMAN, WHITAKER) By arrangement
autumn (2 sections), 7, 1; winter (2 sections), 1, 1; spring, 12; summer, 1

AI. Secretarial Training.—This course offers training in stenography and typewriting supplemented by instruction in the form, arrangement, and the general mechanical make-up of the business letter. It is open to a limited number of students from all departments in the order of their application. Credit for any of the courses in secretarial training is not accepted in fulfillment of the departmental requirements for graduation, but may count as part of the university requirement for the degree. Four hours' instruction a week in stenography and three in typewriting.

4 units, autumn, *winter, *spring, and *summer quarters (SANDERS) TWThF 8
autumn, 52; winter, 36; spring, 36; summer, 10

AII. Secretarial Training.—Development of speed with accuracy on the typewriter coupled with ability to take stenographic dictation at

the rate of 80 words a minute. Discussion of special problems in commercial correspondence and in office management. Open to those who have completed A1 or its equivalent.

4 units, *winter, *spring, and *summer quarters (SANDERS) TWThF 9
winter, 51; spring, 17; summer, 9

AIII. Secretarial Training.—Special emphasis will be laid on further development of typewriter speed and on transcript work. In stenography the student should be able to take dictation at the rate of 110 words a minute. A study will be made of the duties and responsibilities of a secretary and the ethics of business. Open to those who have completed course AII or its equivalent.

4 units, autumn and *spring quarters (SANDERS) TWThF 9
autumn, 10; spring, 37

EDUCATION

SCHOOL OF EDUCATION

The purpose of the School of Education is to enable the University to meet the legitimate demands of the State in the matter of the preparation, training, and certification of teachers and school officers. The faculty of the School is composed of the faculty of the Department of Education, together with representatives from other departments concerned with the preparation of teachers for the intermediate and secondary schools; and the faculty of the School has outlined courses for preparation in both majors and minors which will lead to certification as teachers. A special announcement of the School, giving details as to its organization, requirements, and programs of study, will be mailed on request.

Of this School, the faculty of the Department of Education proper constitutes one division, and the faculty of the Division of Graphic Art another division.

DEPARTMENT OF EDUCATION

ELLWOOD PATTERSON CUBBERLEY, TRUMAN LEE KELLEY, †JESSE BRUNDAGE SEARS, LEWIS MADISON TERMAN, Professors.

WILLIAM WEBB KEMP (President State Teachers' College, San Jose, California), Acting Professor (Summer Quarter).

PERCY ERWIN DAVIDSON, WILLIAM MARTIN PROCTOR, Associate Professors.

† Absent on leave, 1920–21.

Raymond Holder Wheeler (University of Oregon), J. Harold Williams (State School, Whittier), Ben Wood, Acting Assistant Professors (Summer Quarter).

Marvin Lloyd Darsie, Instructor.

Will Christopher Wood (State Superintendent of Public Instruction), Edwin Reagan Snyder (State Commissioner of Vocational Education), Special Lecturers (Summer Quarter).

Ethel Dorothy Whitmire, Research Fellow on the Buckel Foundation.

Jessie M. Chase, Research Assistant in Study of Gifted Children.

Walter Lewis Bachrodt, Teaching Fellow in School Administration.

Dorothy Putnam, Department Librarian, and Secretary of the School of Education.

Mrs. David Evans, Assistant Librarian.

The Department of Education offers six main lines of work:

1. Courses of a general nature on the history, function, financing, and administration of public education, intended in part as information courses for the general university student and without reference to the work of teaching. To such students the courses of Groups I and II are recommended.

2. Three major courses, which may be followed by candidates for the High School Teacher's Recommendation, each counting as one of the required majors, and offering preparation along the following lines:

a. Theory of Education. Intended for those desiring a general acquaintance with educational theory.

b. Supervisor of Special Subjects. Intended as preparation for those planning to become supervisors of special subjects, such as English, History, Science, and Mathematics, in normal schools or in public schools.

c. Principal or Superintendent. Intended for those desiring recommendation for administrative work in city school systems.

Each such major course requires the completion of 45 units of work in the Department of Education. (For an outline of each course, see the *Announcement of the School of Education.*)

3. Courses intended to assist other departments in preparing their students for certification to teach in secondary schools in California. All such students should confer with members of the Department of Education as to courses, but in general, courses 1, 2, 3 or 4, and 20 are recommended, if the candidate has not had experience in teaching. Three units of work in courses relating to secondary-school work are required of all candidates for the high-school teacher's recommendation, under the regulations of the California State Board of Education, as are

courses 27 and 28, if the candidate has not had previous experience in teaching. (For a more detailed statement, see the *Announcement of the School of Education.*)

4. Courses primarily for major students, or those making Education a minor and intended to give special preparation to (*a*) those who desire to become teachers of Education or psychology in normal schools or colleges; (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, elementary or secondary, and (*c*) those who wish to prepare for special educational work in the elementary or secondary field.

5. Courses and research work in the psychology and pedagogy of exceptional children. Two lines of work are offered in this field: (*a*) elementary courses designed to give prospective superintendents and principals a general acquaintance with the problems of special education, and (*b*) research courses for the advanced student who looks forward to work as clinical psychologist in the public schools or institutions for defectives or delinquents. The Dr. C. Annette Buckel Foundation, supplemented by additional support from the Board of Trustees of the University, has provided for a "research fellowship in the psychology and pedagogy of backward children." A second "research assistantship in the study of gifted children" has also been provided.

6. Courses for the preparation of teachers of drawing for the public schools, and for the general training of college students in artistic perception and graphic expression. (See Division of Graphic Art.) Students may enroll as major students in this division, beginning with the freshman year.

The courses in Education are open to all students as electives or as minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (4) or (5), and whose preparation and experience are satisfactory to the department, will be accepted as major students. Only graduates of normal schools or other teachers' training schools, or those having had teaching experience and having junior standing, will be accepted (except under special circumstances) as major students in Education during the two undergraduate years. Graduate work in Education is open to all properly qualified students, without these restrictions.

Major Requirements

Undergraduate Work.—Major students begin their work in Education with the junior year, taking courses 1, 2, and 3 or 4. These courses are also open as electives to second-year students. Psychology 1 and 6 should also be taken this same year. Collateral work will be advised

to meet individual needs, though a course in biological science and the course in Organic Evolution ordinarily will be required. For graduation the student must complete thirty units of selected work in the department, and satisfy the requirements of one teaching major or two minors in the School of Education and outside the department. Students coming with advanced or graduate standing from other universities may have substantially equivalent preparation or experience accepted in lieu of the courses and the major and minor work required here, and be permitted to do more advanced work instead.

First Graduate Year.—The requirements for the baccalaureate degree cover only introductions to the different fields of Education, and those proposing to offer themselves for responsible positions in educational work will be expected to proceed at once to the Master's degree. For this at least thirty units in advance of the baccalaureate requirements, together with the presentation of a satisfactory thesis, will be required. Work in Group I will not be included, and ordinarily one-half of the thirty units must be work listed under Groups III, IV, and V. The completion of the first year of graduate study should mean a somewhat general acquaintance with the different fields of Education, together with the beginnings of specialization in some one or two of these. Those who desire to prepare properly for the type of positions indicated under 4 or 5 should proceed to the doctorate.

Second Graduate Year.—During the second year of graduate study the student will be expected to attain a mastery of the literature and practice in three of the following divisions of the subject: (1) History of Education, European and American, (2) the Theory and Practice of Elementary or Secondary Education, (3) the Organization and Administration of Education, (4) Educational Psychology and Theory, (5) Educational Hygiene. Students intending to proceed to the doctorate, either at once or later, should select one of these divisions as a major and one as a minor, and by the end of the second year of graduate study should also have completed in large part the required work in a second minor, outside of the department; should be able to pass off the modern language requirements (German and French); and should be well started on the dissertation. Acceptance as a candidate for the Ph. D. degree requires an affirmative vote of the department faculty, and acceptance, after a preliminary examination, by a special examining board appointed by the Committee on Graduate Study.

Third Graduate Year.—The final year will be devoted largely to personal investigation along the lines of the thesis subject, under the direction of the member of the department in charge.

Library and Practical Facilities

The general University Library contains the important recent books, files of the more important educational magazines, both American and foreign, and a collection of early American educational magazines and reports. The special library of the department, consisting of about 8000 volumes, contains one of the most complete collections of American state and city school reports to be found in the United States, the library ranking probably third in this respect. It is also rich in old college and normal school catalogues and text-books, of much historical value. The collection of old and present-day text-books is also large and valuable.

In practical facilities the department has good working connections with the State Teachers' College at San Jose, and with the public schools of the immediate vicinity. For more important studies by advanced students the large city school systems in the vicinity of the University can usually be made available.

The department is also provided with a research laboratory for use in connection with the Buckel Foundation. This is well equipped with the apparatus, blanks, and other materials used in mental and physical tests.

Additional courses to those listed below will be provided for the summer quarter.

I. Elementary and Introductory Courses

[Open to any one with teaching experience, and to all others except first-year students.]

1. Public Education in America.—A study of some of the more important present-day problems in the organization and administration of public education in the United States, in the light of their historical development. An introductory course. Lectures, following a text, with assigned readings.

3 units, autumn quarter (Cubberley) MWF 11
autumn, 55

2. Introduction to the Study of Education.—A study of typical phases of the organization and administration of public education, with a view to presenting such a body of information relating to the work of our public schools as the citizen and the teacher ought to have, and at the same time making the course an introduction to the various fields of education. Lectures, following a text, and assigned readings and reports.

3 units, winter quarter (Darsie) MWF 11
winter, 46

3. Hygiene of the School Child.—A study of the physical basis of education, including such topics as growth, physical defects, health

supervision, etc. Lectures following a text, and assigned readings and reports.

3 units, spring quarter (DARSIE) MWF 11
1½ units, first half, summer quarter (DARSIE) MWF 8
spring, 46; summer, 46

4. Educational Theory.—An introduction to a philosophy of education, construed as an integrated view of the conditions and purposes of educational effort; biological infancy, human endowment and culture, education in relation to the problems of social progress and conservation. Lectures, following a syllabus, with assigned readings.

5 units, spring quarter (DAVIDSON) MTWThF 9
spring, 46

II. MORE ADVANCED COURSES, BUT OF A SOMEWHAT GENERAL NATURE

[Open to those of teaching experience, and to third- and fourth-year students. In general, courses 1, 2, and 3 or 4 should precede these courses.]

12. Education and Character.—A study of the significance for education of the psychology of character. Growth and character; types and individual differences; principles of training; educative agencies.

5 units, winter quarter (DAVIDSON) MTWThF 9
winter, 27

14. Intellectual Education.—A study of the significance for education of the psychology of attention, interest, thinking, and belief. Development; individual differences; principles of training; educative agencies.

5 units, winter quarter (DAVIDSON) MTWThF 10
winter, 7

16. Health Supervision in Schools.—A study of plans for health supervision in schools, health grading, the school clinic, transmissible diseases, school housekeeping, the teaching of hygiene, the teacher's health, and some consideration of the hygiene of the school plant. Lectures and class discussion, following a text. Courses 3 and 16 should be taken together as a combined course.

1½ units, summer quarter, 1st half (DARSIE) TTh 8
summer, 47

III. COURSES INTENDED PRIMARILY FOR THOSE PREPARING TO TEACH IN SECONDARY SCHOOLS

[Open to seniors and graduate students. Course 27 should precede course 28 by one quarter.]

20. Principles of Secondary Education.—A course dealing with the aims, purposes, and underlying principles of secondary education, intended for those preparing to teach in secondary schools, and required of all candidates for the California High School Recommendation. Open to seniors and graduate students only.

3 units, autumn and *spring quarters (PROCTOR) MWF 8
autumn, 43; spring, 56

23. The Reorganization of Secondary Education.—A critical study will be made of the various reports and recommendations of the National Committee on the Reorganization of Secondary Education, together with a consideration of the work of the junior high school, and pre-vocational and vocational education as these relate to the junior and senior high schools.

5 units, summer quarter (Will Wood, 1st half; Snyder, 2d half) MTWThF 8
summer, first half, 41; second half, 25

24. Part-Time and Continuation Education for Minors and Adults.—A course dealing (1) with the problem of providing for minors who have already left school and entered upon production, instruction designed to prepare them for a suitable occupation, and for their other duties and responsibilities as citizens; (2) with the problem of providing vocational and social guidance through instruction, advice, and the correlation of their home, school, employment, and recreational experiences.

This course will also deal with the problem of establishing community educational service in secondary schools by providing for adult instruction, designed to remove illiteracy, to supplement occupational experience, and otherwise to prepare liberally for the pleasures, duties, and responsibilities of full and effective American citizenship.

1½ units, summer quarter, 2d half (Snyder) MWF 9
summer, 18

25. Vocational Education and Guidance.—A course in principles, methods, and literature of vocational education and vocational guidance. Consideration will be given to methods of vocational guidance in high schools and to the organization and administration of vocational and part-time education under state and national laws. The course will be designed to meet the needs of voctional counselors, directors of vocational part-time education, and high school principals.

3 units, winter quarter (Proctor) MWF 8
2 units, summer quarter (Proctor) TTh 9
winter (2 courses), 42, 33; summer, 23

27. Methods and Management of Instruction.—A practical course in the methods and management of secondary instruction. The psychology of the high-school subjects will be considered, and opportunity for directed observation of expert secondary instruction will be given. This course is intended to be a preparation for practice teaching, and should be taken before course 28.

2 units, autumn and *spring quarters (Proctor) TTh 8
autumn, 30; spring, 59

28. Practice Teaching.—Practice in the handling of classes and the giving of instruction, with accompanying conferences, six units of

credit in such work being required of all inexperienced teachers, by the rules of the State Board of Education, for a California High School Teachers' Recommendation. This may be arranged for at the University, at the State Teachers' College, San Jose, or at any state normal school in California. Those who desire to do practice teaching should secure from the Secretary of the School of Education, or from the Director of Teacher Training, a blank form of application for a practice-teaching position, and fill out and file the same with the Director of Teacher Training during the quarter preceding the one in which they desire to fulfill their practice teaching requirement. Prospective cadet teachers should confer in advance with Professor PROCTOR. Conference with all practice teachers required each week.

3 units, autumn, *winter, and *spring quarters (PROCTOR) Conference M 4:05–5
autumn, 23; winter, 46; spring, 29

IV. ADVANCED COURSES

[Intended primarily for teachers of some experience, and for students making Education a major or a minor. Open to such of junior standing or above.]

30. Education and Modern Social Problems.—A discussion of principles in connection with the following topics: The distribution of educational opportunity; federal aid; education and industry; education and the problems of citizenship and nationality; Americanization of aliens; family, church and school; liberal education; professional ethics; teachers' unions and organizations; the democratic principle in school administration.

5 units, summer quarter (DAVIDSON) MTWThF 10
summer, 31

31. Education and Character: Advanced.—A continuation of courses 12 and 14. Open to students who have had either of these courses or its equivalent.

4 units, spring quarter; 2½ units, summer quarter (DAVIDSON)
spring, 11; summer, 29 Hours to be arranged

32. Mental Tests.—An introductory course, dealing with the fundamental principles of mental testing, the Binet scale, and group-test procedure. General Psychology is prerequisite, and Educational Statistics must precede or accompany.

4 units (WHEELER, 1st half; BEN WOOD, 2d half) MTThF 9
summer, first half, 26; second half, 23

33a. Educational Psychology.—Original endowment; mental development; individual differences in relation to heredity, sex, and environment. General Psychology is a prerequisite, and Educational Statistics must accompany or precede.

4 units, autumn quarter (TERMAN) MTThF 11
4 units, summer quarter (WHEELER, 1st half; BEN WOOD, 2d half) TWThF 10
autumn, 24; summer, first half, 22; second half, 24

33b. Educational Psychology.—Learning, formal discipline, work and fatigue. Prerequisites: General and Experimental Psychology, or their equivalents. Educational Statistics must accompany or precede.

4 units, winter and summer quarters (TERMAN) MTThF 11
winter, 17

34. Graphic Methods of Presenting Facts.—This course is designed to give practice in the methods which are serviceable in the popular portrayal of statistical data. In addition to graphic presentation some attention will be devoted to a consideration of the merits of various tabular arrangements of material. There are no prerequisites to the course, but a knowledge of lettering is desirable. Intended primarily to show prospective school officers how best to display statistical facts.

2 units, autumn quarter (KELLEY) TTh 10

35. Educational Statistics.—This course will deal with the theoretical and practical aspects of statistical methods as applied to education, including scales, units, and standards. The use of calculating instruments, calculating handbooks, and graphic methods will be demonstrated, and practice will be given in treatment of statistical data. In so far as possible the program will be adjusted to meet the needs of individual students specializing in mental measurements, experimental pedagogy, or educational administration.

4 units (KELLEY) MTWTh 8
autumn, 34; summer, 41

35a. Graphic Methods in Education.—A practical working course in chart making and the graphic representation of educational facts. Special emphasis is placed on the illustration of educational reports. A previous or concurrent course in free-hand lettering is desirable, but not essential. Each member of the class should own or have access to a small set of drawing instruments, including ruling pen, compass, T-square, and triangle. Chiefly a laboratory and practice course.

2 units, summer quarter, 2d half (WILLIAMS) MTThF 1–2
summer, 15

36. Statistical Methods.

4 units, winter quarter (KELLEY) MTThF 8
winter, 6

37. Juvenile Problems in Education.—A study of the extent, causes and prevention of juvenile delinquency, mental deficiency, and other social irregularities related to the work of the public schools and state institutions. Special attention is given to the recent juvenile research developments in California, and to the newer methods of dealing with exceptional children.

2½ units, summer quarter, 2d half (WILLIAMS) MTWThF 8
summer, 25

38. History of Education in Europe.—A study of the development of educational practices and systems through the Greek, Roman, medieval, and modern periods in Europe, with the main emphasis upon the post-renaissance period. A study of present-day education and present-day state educational organization in the light of their historical development, and a study of the history of practices rather than the history of theory. Designed especially for major students and those expecting to teach the history of education in normal schools and colleges. Study of text and sources.

3 units, winter and spring quarters (CUBBERLEY) W 11; TTh 4–5
5 units, summer quarter (CUBBERLEY) MTThF 4–5
winter, 28; spring, 33; summer, 66

39. History of Education in America.—A study of the evolution of American educational ideals and practices, with some emphasis upon their more important European antecedents, but with special reference to the origin and development of those features of our present-day practices which are most characteristically American. Lectures, following a text, with assigned readings, and the investigation of a special topic.

3 units (CUBBERLEY) [Not given in 1920–21]

40. State School Administration.—A study of the educational principles underlying the proper administration of school systems in states and counties, and involving a comparative study of the school laws and school systems of the various American states. The course includes a study of such topics as federal and state policy, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, private and sectarian education, and state oversight and control.

4 units, winter quarter (CUBBERLEY) MWF 10
winter, 21

40a. Problems in State School Organization and Administration.—A consideration of some of the more important problems in state educational organization and administration, and the formulation of needed legislation for their solution.

1½ units, 1st half (WILL C. WOOD) MWF 9
summer, 27

42. Rural Education.—A study of the social and economic factors involved in the development of rural institutional life; how these explain the present status of the larger administrative and supervisory problems of rural education; and the principles and practical methods essential to the solution of these problems.

2 units (CUBBERLEY) [Not given in 1921–22]

44. The Principal and His School.—A practical course, dealing with the organization and administration of a single school, the organiza-

tion and supervision of instruction, school extension, community relationships, etc. Thesis on some administrative problem required of each student.

3 units (CUBBERLEY) [Not given in 1920–21]

45. City School Administration.—A study of the educational, financial, and administrative principles underlying the proper administration of school systems in cities, with a view to the establishment of principles of action. A thesis on some problem in city school organization or administration or a survey of some city school system required of each student.

4 units, autumn quarter (CUBBERLEY) MWF 10
5 units, *summer quarter (KEMP) MTWThF 11
autumn, 27; summer, 17

46. School Surveys and Educational Diagnosis.—A study of the literature relating to school surveys and other forms of educational measurements, as a basis for the investigation of practical problems in school administration and supervision. How to organize and conduct a school survey, what to look for, how to collect and interpret data, and how to set forth the results of the investigation will be important features of the course.

4 units, autumn quarter (SEARS) [Not given in 1920–21]

47. School Finance.—A study of educational finance, including such topics as sources of finance, budget making, and accounting.

5 units, summer quarter (SEARS) [Not given in 1920–21]

49. Educational Tests and Measurements.—A course dealing with the use and interpretation of educational tests and scales in the administration and supervision of instruction, simple statistical and graphical methods, the significance of scores, and the diagnostic value of the results obtained.

4 units, winter quarter (KELLEY) MTThF 9
5 units, *summer quarter (KELLEY) MW 2–4
winter, 12; summer, 21

50. The Elementary School Curriculum.—A study of the principles underlying the organization of subject-matter for courses in the elementary school, including a critical examination of curricula, syllabi, and school texts in the light of their function in the teaching and administration of the curriculum.

3 units, summer quarter (SEARS) [Not given in 1920–21]

51. Organization and Supervision of Elementary Education. A course dealing with the more important problems of organization, management, and supervision of the elementary school, including such topics as grade, departmental, group, and individual systems of class

organization; typical promotion schemes; program making; time allotment; grades and marks; records and reports; attendance, and retardation.

4 units, autumn quarter (KELLEY) MTThF 8
autumn, 35

53. Criticism and Supervision of Instruction.—A few advanced students, who have had sufficient teaching experience, will be allowed to undertake the personal investigation, in the schools of the vicinity, of problems in instruction or supervision. Collateral reading and detailed written reports will be required. Enrollment only after conference with the instructor concerned.

1 unit, autumn, *winter, and *spring quarters (PROCTOR)

54. Thesis Work.—In certain courses, students may be given an additional unit of credit on presentation of a satisfactory thesis on an assigned topic, embodying the results of independent work. The consent of the instructor is necessary before registering.

1 unit, any quarter

55. Current Problems in Public Education.—A seminar type study and discussion of current problems in the organization and administration of public education. Opportunity for individual and group investigations in the following fields: the organization of a national program of education; problems in state and country school administration; problems in the organization of elementary and secondary administrative units; problems in the administration of teacher training institutions.

4 units, summer quarter (KEMP) TTh 2–4
summer, 14

V. GRADUATE AND SPECIAL COURSES

[Intended primarily for graduate students in Education and Psychology.]

56. American Teaching Practice.—An appraisement of the procedures employed in the teaching of the elementary school branches in the light of the available experimental and statistical studies bearing upon them. Arranged primarily for principals and supervisors.

3 units, summer quarter (DAVIDSON) F 2–4
summer, 14

57a. Intelligence Tests and the Psychology of Endowment.—The first quarter will be devoted to a critical survey of the literature of mental tests, with special reference to the psychological principles of measuring intelligence. Prerequisites: General and Experimental Psychology, and Educational Statistics.

4 units, autumn quarter (TERMAN) MTW 1–4
autumn, 18

57b. Intelligence Tests and the Psychology of Endowment.—A continuation of 57*a*. During the second quarter practice will be given in mental testing and the treatment of data.

4 units, winter quarter (TERMAN) MTW 1–4
winter, 15

59. Practical Administrative Problems.—A study and discussion of a number of practical problems in the organization and administration of a system of public instruction, in cities.

4 units, summer quarter (CUBBERLEY) [Not given in 1920–21]

60. Mental Test Problems.—A critical survey of literature and research problems relating to mental testing. Prerequisites: General and Educational Psychology, Educational Statistics, and the equivalent of course 30.

4 units, summer quarter (TERMAN) MTWTh 9
summer, 15

60a. Seminar in Mental Tests.

spring quarter (TERMAN)
spring, 14

61. Reading Seminar in Educational and Applied Psychology.

1 unit, winter and spring quarters (TERMAN, KELLEY) Alt. Th 7:30–9:30
winter, 12; spring, 12

62. Reading Seminar in Administrative Problems and Procedure.

1 unit, autumn, winter, and spring quarters (CUBBERLEY, TERMAN, PROCTOR) Alt. Th 7:30–9:30
autumn (4 groups), 1, 7, 3, 1; winter (2 groups), 1, 10; spring (4 groups), 4, 7, 2, 8

63. Research Seminar.—Devoted to problems in mental tests and applied psychology. Prerequisites: Educational Statistics, General and Experimental Psychology, and one or more courses in mental tests.

4 units, spring and summer quarters (TERMAN) [Not given in 1920–21]

70. Special Courses.—In addition to the listed courses, special work in independent investigation will be provided for students prepared to do such advanced work, the nature of the investigation being determined by the student's preparation and needs. The number of units of credit to be given is subject to individual arrangement. The members of the instructing staff stand ready to supervise independent investigations in the following fields:

(*a*) Problems in educational theory. (DAVIDSON)

(*b*) Problems in the history and organization of education. (CUBBERLEY)

(*c*) Problems in state, county, and city school organization, finance, and administration. (CUBBERLEY, SEARS)

summer, 6

(*d*) Problems in the organization and administration of elementary education. (SEARS, KELLEY)

(*e*) Problems in the organization and administration of secondary education. (PROCTOR)

(*f*) Problems in educational psychology and mental tests. (TERMAN)

summer, 10

(*g*) Problems in educational tests and measurements, and problems requiring statistical treatment. (KELLEY)

VI. COURSES FOR TEACHERS OF SPECIAL SUBJECTS

A number of special courses of instruction, and groupings of courses, designed to prepare teachers for special work in the public schools, have been arranged and are described in the *Announcement of the School of Education* (issued in June). These include courses designed to prepare commercial teachers, manual arts teachers, teachers of home economics (in connection with the San Jose State Teachers' College), teachers of physical training, and teachers of the various high school subjects.

VII. COURSES IN OTHER DEPARTMENTS

The following Teachers' Courses, in other departments, are designed for students preparing to teach special subjects in secondary schools, and are offered in connection with the preparation of the teaching majors and minors as described in the *Announcement of the School of Education*. Such courses are usually necessary for the Teacher's Recommendation, and may be counted to the extent of four and a half units as part of the work required in education. (See *Announcement of the School of Education* for further information.)

a. TEACHER'S COURSE IN CHEMISTRY.—[See Department of Chemistry.]

b. TEACHER'S COURSE IN DRAWING.—[See Division of Graphic Art.]

c. TEACHER'S COURSE IN ENGLISH.—[See Department of English.]

d. TEACHER'S COURSE IN FRENCH.—[See Department of Romanic Languages.]

e. TEACHER'S COURSE IN GERMAN.—[See Department of Germanic Languages.]

f. TEACHER'S COURSE IN GREEK.—[See Department of Greek.]

g. TEACHER'S COURSE IN HISTORY.—[See Department of History.]

h. TEACHER'S COURSE IN LATIN.—[See Department of Latin.]

i. TEACHER'S COURSE IN ORAL EXPRESSION.—[See Department of English.]

j. TEACHER'S COURSE IN PHYSICS.—[See Department of Physics.]

k. TEACHER'S COURSE IN SPANISH.—[See Department of Romanic Languages.]

DIVISION OF GRAPHIC ART

ARTHUR BRIDGMAN CLARK, Professor.
CHLOE LESLEY STARKS, Assistant Professor.
EMIL GREBS, Lecturer.

The work aims primarily to prepare students for positions as teachers of drawing and art in secondary schools. Many of the courses are also suitable for the practical and general cultural needs of students in other departments.

Intending teachers of art may register with Graphic Art as their major subject.

REQUIREMENTS FOR GRADUATION

A. As Preliminary to a Fifth Year.—50 units in Graphic Art; 21 to 51 units (the completion of all except 9 units) of a teaching major or two teaching minors, other than Graphic Art; *9–13 units in Education applicable to the Secondary Teacher's Certificate. (180 units as a total in all courses.)

(The requirements of various departments for teaching majors and minors are set forth in the *Announcement of the School of Education,* pp. 39–58.)

B. Including Special Certificate of the Manual or Fine Arts Type Courses, as required by the State Board of Education.—67 units in Graphic Art and Drawing; *23 units in Education; 45 units (15 each in any three) teaching majors or minors; balance of 180 units, any courses in the University.

(See *Announcement of the School of Education,* pp. 29–30, and 59–60. This certificate permits the holder to teach only the special subjects in which he is recommended and not the so-called "regular" subjects of the high school, not even in part.)

C. Master's Degree, including Secondary Teacher's Certificate.—One graduate year including the following: 26 units, including thesis, in Graphic Art; *11 units in Education (or enough with courses taken in previous years to make the required 23 units); 9 units in the teaching major or minors (other than in Graphic Art), or enough with the courses taken previously to complete these majors or minors.

1. Still-Life and Out-of-Door Sketching.—Fundamental principles in blocking, proportion, and light and shade; materials; charcoal and colored crayon. Open to all students.

3 to 5 units, autumn quarter (STARKS) MTWThF 1:05–4:05
autumn, 11

* Course 10 in Graphic Art may count either as Education or as Graphic Art, but not as both in the same schedule.

2. Landscape.—Working out-of-doors in pencil, charcoal, and colored crayon. Open to all students who have had the equivalent of course 1.
4 units, spring quarter (STARKS) MTWTh 9–12
spring, 12

3. Organic Form.—Drawing shells, leaf sprays, animal forms, etc., with reference to discipline in accuracy, and the perception of decorative arrangement. Preparation for course 4. Open to all students.
3 to 5 units, winter quarter (STARKS) MTWThF 1:05–4:05
winter, 12

4a. Design.—Structural design, attention to expression of structure, space filling, borders, squares, surface patterns, etc., in application to crafts and the interior of the house. Three units of technical work, preferably course 3, a prerequisite. (May be taken with advanced problems by fourth- and fifth-year students.)
3 units, spring quarter (CLARK) MTW 1:05–4:05
spring, 12

4b. Design in Color.—The design school of recent development, based upon or developed from the use of rich color wherever it may be found in nature and in art. The aim of the course is to develop creative expression in design and color. A series of problems will be given, setting forth principles of design composition and color harmony. Each problem to be rendered by the student directly with the brush in tempera color.

Beginning with basic geometric forms, the student is led to interpret flowers, birds, and a diversity of Nature's forms. This course is prerequisite to Textiles, *7d*.
5 units, winter quarter (STARKS)
winter, 20 Lec. TTh 8, MTWThF 1:05–4:05; Lab. to be arranged

5. Art of House Building.—The course is a systematic study of the fundamental principles which underlie taste, convenience, and economy in house designing and furnishing. The principles and necessity of civic planning are also given brief consideration. The subject matter treated is of such universal interest and importance that the exercises assigned are kept well within the accomplishment of earnest students even though they may have had little or no previous training in drawing. However, a great deal of drawing, chiefly with the pencil, is required in the course as the most efficient means to the understanding of design in proportion, line and surface, and sensitiveness to beauty of all kinds. These drawings are made in part with the T-square on a drafting board, in part by tracings from cuts and photographs. The first half deals with types of exteriors and their design and plans; the second half with interior treatment, furniture, yard, and civic planning.

A few trips of observation will be made in the suburban towns toward San Francisco. Open to all students.

5 units, winter quarter (CLARK) MTWThF 11
winter, 29

6a. Lectures on Painters of the Renaissance from Giotto to Velasquez.—Open to all students.

3 units, autumn quarter (CLARK) MWF 9
autumn, 53

6b. Lectures on Painters of the Nineteenth Century and of the Present Time.—Open to all students.

3 units, winter quarter (CLARK) MWF 9
winter, 47

7a. Handicrafts.—Pottery, modeling, casting, glazing, and firing bowls, vases, etc. Open to students who have had three units of technical work in drawing or design.

5 units, autumn quarter (CLARK) MTWThF 1:05–4:05
autumn, 6

7b. Handicrafts.—Metal work, making trays, bowls, book supports, etc., in sheet copper; and jewelry, in silver and semi-precious stones. Open to all students who have had three units of technical work in drawing or design.

5 units, winter quarter (CLARK) MTWThF 1:05–4:05
winter, 7

7c. Handicrafts.—Textiles. The decoration of textiles in articles of house use, and personal belongings, block-printing, decoration of textiles by dyeing, embroidering and batik. Open to students who have had course 4*b* or its equivalent.

5 units, spring quarter (STARKS) MTWThF 1:05–4:05
spring, 11

8. Scientific Perspective.—A series of problems drawn with instruments, and involving the various principles of perspective and shades and shadows. The latter part of the course involves making drawings from actual buildings. Open to all students.

5 units, autumn quarter (CLARK) MTWThF 11
autumn, 17

9. Science Drawing.—A course designed to assist students in scientific illustration. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, line and wash. Especial attention is paid to the needs of individual students. Open to science students on advice.

3 units, autumn and *winter quarters (STARKS) 8–12 by arrangement
autumn, 2; winter, 4

10. Teachers' Course.—For intending teachers of art. Discussions of the aims and methods in drawing and art instruction in the public

schools, technical work in review and in preparing courses of study, and trips for observation of teaching methods in the schools of neighboring cities. Open only to senior and graduate students.

4 units, spring quarter (CLARK) MWF 11, and F 1–4
spring, 11

11. Seminar.
1 unit (CLARK)

12. Commercial Art and Lettering.—Poster work, a study of the requirements of commercial art, technical difficulties and limitations, studies in lettering for artistic and commercial needs, many practical problems of commercial and printing arts. Open only to students of considerable previous training in drawing.

5 units, autumn and spring quarters (GREBS) MTWThF 1:05–4:05
autumn, 17; spring, 15

13. Special Courses in Art Education.—Advanced work in connection with the subject matter of courses 4, 5, 7, 9, 10, and 11, will be arranged for graduate students.

autumn, winter, and spring quarters (CLARK) By arrangement
autumn, 8; winter, 1; spring, 2

ENGINEERING

A. ENTRANCE SUBJECTS

Entering students whose major work is to be in any engineering department should be thoroughly prepared in elementary mathematics, with entrance credit in algebra (at least one and one-half units), plane geometry, and plane trigonometry, in order to be able to take the first year's work in applied mathematics for engineers. Furthermore, it is advisable for them to have entrance credit in mechanical drawing

Students who expect to complete the requirements for graduation from the Civil Engineering Department in four years, should enter with credit for two high-school units in one foreign language, one unit in chemistry, one unit in biological science, and one unit in history, in addition to the foregoing preparation in mathematics.

B. GENERAL COURSES

I. APPLIED MATHEMATICS

[See courses announced by Department of Applied Mathematics.]

II. GENERAL TECHNICAL COURSES

1. Linear Drawing. A training in the use of drafting implements to enable the student to construct accurate pencil drawings and make

clean-cut ink lines. Open to all students, and required of those whose major subject is in Civil, Mechanical, Electrical, or Chemical Engineering, or in Geology and Mining, whether or not they have entrance credit in mechanical drawing. This requirement is waived, however, for a student who satisfies the instructor that he has had the equivalent of this course, by submitting certified work in linear drawing or by passing a special examination. The instruments and materials for this course cost from thirty to forty dollars.

1 unit, autumn, *winter, and *spring quarters (THOMAS) W 1:05–4:05, or S 9–12
autumn, 50; winter, 25; spring, 44

2. Lettering.—A training in engineering lettering and title making. Open to all students, and required of those whose major is in Civil, Mechanical, Electrical, or Chemical Engineering, or in Geology and Mining, whether or not they have entrance credit in mechanical drawing. This requirement is waived, however, under certain conditions specified under Linear Drawing, above.

1 unit, autumn, *winter, and *spring quarters (THOMAS) W 1:05–4:05, or S 9–12
autumn, 72; winter, 51; spring, 80

3. Descriptive Geometry.—Open to students who have completed or are taking Engineering 1 and 2, or have had their equivalent. It is required of students whose major is in Civil, Mechanical, Electrical, or Chemical Engineering, or in Mining and Metallurgy.

This course deals with principles and methods used in making with mathematical exactness drawings of objects and geometrical magnitudes, and in solving problems involving their space relations, without going into details of shop notes, field notes, machine drawing and design, and topographic and geologic mapping, to which subjects it serves as a preliminary.

The principles embodied in the course are limited to those pertaining to the "method of choosing new projection planes," the method almost universally used in Engineering practice.

3 units, winter quarter (CUTTER)
winter, 150 Rec. Th 8 or 11; Dft. MT 1:05–4:05, or ThF 1:05–4:05

10. Applied Mechanics.—Lectures and recitations. Strength and elastic properties of the ordinary materials of engineering construction. Simple tension, compression, and shear. Flexure, with application to simple, continuous, and non-homogeneous beams. Long columns, torsion, repeated stress, sudden stress, resilience, etc. Laboratory: Testing strength and elastic properties of materials and structures. Open to students who have completed courses *3a* and *3b* in Applied Mathematics.

5 units, autumn quarter (MOSER)
Lec. MWF 9; Lab. MWF 10–12, or TTh 9–12, or MT 1:05–4:05, or ThF 1:05–4:05
autumn, 106

11. Applied Mechanics.—Continuation of Engineering 10.

5 units, winter and spring quarters (Moser)
Lec. MWF 9; Lab. MWF 10–12, or TTh 9–12, or MT 1:05–4:05, or ThF 1:05–4:05
winter, 79; spring, 11

11c. Mechanics of Materials.

2 units, spring quarter (Moser)
spring, 6

12. Hydraulics.—Lectures and recitations. Fluid pressure and equilibrium, flow of water through orifices, over weirs, in open and closed conduits. Laboratory. Calibration of instruments. Measurement of pressure, velocity, and flow and friction loss of water under various conditions. Open to students who have completed courses *3a* and *3b* in Applied Mathematics.

5 units, spring quarter (Moser)
Lec. MWF 9; Lab. MWF 10–12, or TTh 9–12, or MT 1:05–4:05, or ThF 1:05–4:05
spring, 106

[Note.—See also Hydraulic courses listed under Mechanical Engineering.]

Laboratory Fees.—Courses 3, 10, and 11, $1 each; 12, $2.

CIVIL ENGINEERING

Charles David Marx, John Charles Lounsbury Fish, Leander Miller Hoskins, Charles Benjamin Wing, Professors.
Charles Moser, Earl Charles Thomas, Assistant Professors

A. Topographic Engineering

19. Map Reading.—Interpretation of maps, including topographic maps. Open to students who know how to solve right triangles. Required of students whose major subject is Civil Engineering.

1 unit, autumn, *winter, and *spring quarters (Thomas)
autumn, 52; winter, 22; spring, 9 W 1:05–4:05 (or S 9–12)

20. Elementary Surveying.—Ten recitations: first principles of surveying, including coördinates, bearings, azimuths, deflections, stadia, and leveling. Field (45 hours): exercises with tape, pocket instruments, traverse board, transit, level and plane table. Drafting room (15 hours): plotting and adjusting traverses; plotting profiles; computing areas; inter-relations of bearings, azimuths, deflections, and latitudes and departures. Required of students whose major subject is Civil Engineering or Geology. Open to others only by permission. Prerequisites: Engineering 1 and 2, Applied Mathematics 1*a*.

3 units, autumn, and *winter quarters (Thomas)
Rec. Th 9; Field and Dft. MT 1:05–4:05 (or ThF 1:05–4:05)
autumn, 59; winter, 22; spring, 18

21. Advanced Surveying.—Care and adjustment of instruments; solar observation for azimuth; organization of parties; introduction to land, city, mine, and hydrographic surveying; base line measurement, triangulation; staking out structures; preliminary survey for railroad location; running circular curves. Required of students whose major subject is Civil Engineering or Geology. Open to others only by permission. Prerequisite: course 20.

4 units, spring quarter (THOMAS) Rec. Th 9; Field and Dft. WThF 1:05–4:05
spring, 17

22. Topographic Surveying.—The class will make a topographic survey of about 500 acres of foothill land on the campus. Each student will make a complete map of the area. The following methods of topographic surveying will be employed: transit-stadia, plane-table-stadia, and hand level cross sections from a stationed line. Required of students whose major subject is Civil Engineering. Prerequisites: courses 19, 20, 21.

2 units, autumn quarter (THOMAS) [Not given in 1920–21]

23. Special Surveying.—Special courses intended for students who have completed course 20, or who have had practical experience in surveying, and who are interested in continuing some particular branch of surveying. Open only by permission.

1, 2, or 3 units, *autumn, *winter, and *spring quarters (THOMAS)
autumn, 5; winter, 36; spring, 6 By arrangement

24. Elementary Surveying.—An abridged course intended for Mechanical Engineering students. Care and adjustment of instruments; field exercises with tape; pocket instruments; level and transit. The application of plane surveying methods to mechanical engineering problems will be considered. Open to students whose major subject is Mechanical Engineering and to others only by permission. Prerequisites: Engineering 1 and 2 and Applied Mathematics 1*a*.

2 units, winter quarter (THOMAS) Field and Dft. MT 1:05–4:05

B. ENGINEERING ECONOMICS

30. Engineering Economics.—The problem of economic selection, interest, sinking funds, first cost, salvage value and depreciation, elements of cost of service (including amortization), methods of estimating, basis of economic comparison, procedure in economic selection. (Written recitations and problems.) Open to those who have 90 units of credit, and to others by permission.

3 units, spring quarter (FISH) Rec. MWF 8
spring, 64

31. Engineering Estimates and Reports.—Each student makes preliminary plans and estimates in connection with two or more structures

proposed for a stated service, makes economic comparison and choice based on the estimated costs, and prepares a report on the object, conditions, methods, and result of his investigation. The course offers training in analyzing problems of choosing structures, logically planning steps of an engineering investigation, executing the steps (including use of references, of cost data, of methods of estimating, and arrangement and record of computation), and writing reports. Roughly, one-third of the time is devoted to looking up references, one-third to drawing and computing, and one-third to writing and revising the report. Open to those who are taking or have completed course 30, and to others by permission.

1 to 5 units, autumn, *winter, and *spring quarters (FISH) By arrangement
autumn, 9; winter, 3; spring, 12

C. RAILROAD ENGINEERING

40. Railroad Surveying.—Curves, turnouts, earthwork, mass-curve, preliminary survey, paper location, and field location.

4 units, autumn quarter (FISH) Rec. TTh 9; Dft. and Field MT 1:05–4:05

42. Special Railroad Surveying.—Courses arranged to meet special needs of students who have completed course 40 above, or have had considerable experience in railroad surveying. (Field work can be done only when two or more students elect to pursue the same work.) Open only by permission.

1 to 5 units, autumn, *winter, and *spring quarters (FISH) By arrangement
autumn, 16

43. Railroad Construction.—Field or office work assigned to individuals, according to their needs, along one or more of the following lines: (1) Excavating methods and plants. (2) Situation and drainage surveys; preliminary plans and estimates; choice of structure and site; working drawings; staking out; inspection; estimates of work done. (3) Collecting, recording, and filing information; instructions and reports. A formal report is required on each engineering problem assigned. Open to students who have completed courses 30 and 40, and to others by permission.

1 to 5 units, autumn, *winter, and *spring quarters (FISH) By arrangement

44. Railroad Location.—Locomotive tractive force and resistances thereto, velocity profile, momentum grade. Traction problems involving inter-relation of train weight, grade, speed, and characteristics of locomotive. Value of change in distance, curvature, rise and fall, and ruling grade, based on analysis of operating expenses. Pusher grades, balanced grades for unequal traffic and for adjacent divisions. Prerequisites: courses 30 and 40.

5 units, winter quarter (FISH) By arrangement

45. Railroad Reconnaissance.—An examination of country for feasible routes between two designated points. Collection and reduction of data for determining the relative merits of two or more feasible routes, and for estimating the promise of a road proposed to be built on the most favorable route. Prerequisites: courses 30, 40, 43, and 44.

5 to 10 units, autumn, *winter, and *spring quarters (FISH) By arangement
autumn, 1

D. STRUCTURAL ENGINEERING

50. Elements of Design.—(1) Materials (see Mining and Metallurgy 18). (2) Analytical and graphical determination of stresses in simple structures. (3) Investigation of distribution of stresses in structural details. Open to students who have completed Engineering 1, 2, and 3, and have taken or are taking Engineering 10 and Mining and Metallurgy 18.

3 units, autumn quarter (WING) MTW 1:05–4:05
autumn, 23

51. Elements of Design.—(1) Wood, stone, brick, lime, cement, etc., studied from engineering standpoint. (2) Bearing power of soils, distribution of pressure, and details of design of simple sub-structures. (3) Designs, working drawings, bills of materials, and estimate of cost of some simple structure, such as a mill building or highway bridge. (4) Testing physical properties of cement and other masonry materials. Prerequisite: course 50.

5 units, winter quarter (WING) Lec. MWF 11; Dft. and Lab. MTW 1:05–4:05
winter, 22

52. Elements of Design.—This course completes the work undertaken in course 51.

5 units, spring quarter (WING, MOSER)
spring, 20 Lec. MWF 11; Dft. and Lab. MTW 1:05–4:05

53. Elements of Design.—A short course to meet the requirements of students taking their major in Mining, Mechanical, Electrical, or Chemical Engineering. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings. Open to students who have had Engineering 1, 2, 3, 10, and Mining and Metallurgy 18.

3 units, quarter by arrangement (WING) By arrangement
autumn, 2; winter 1

54. Structural Design.—Determination of stresses in modern types of bridges, including cantilever and swing spans, masonry arches, and arch ribs; discussion of most economical types, spans and dimensions of bridges and bridge members; study of methods of constructing subaqueous sub-structures, shop methods, erection, inspection of material, specifications, and other factors influencing the design of structures.

Designs are made by each student to fulfill actual conditions. Prerequisite: course 52.

5 units, autumn quarter (Wing) Lec. TTh 10; Dft. WThF 1:05–4:05
autumn, 14

55. Structural Design.—Continuation of course 54.

5 units, winter quarter (Wing) Lec. TTh 10; Dft. WThF 1:05–4:05
winter, 14

56. Structural Design.—Continuation of course 55.

3 units, spring quarter (Wing) By arrangement
spring, 6

E. Hydraulic Engineering

60. Water-Supply Engineering.—Sources of supply. Collection and storage of water for water supply of towns or for irrigation. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. Prerequisites: Engineering 3, 10, 11, and 12, and Civil Engineering 51 and 52.

5 units, autumn quarter (Marx) Lec. MTWThF 10; Dft. MTWThF 1:05–4:05
autumn, 18

61. Water-Supply Engineering.—Continuation of course 60

5 units, winter quarter (Marx) Lec. MTWThF 10; Dft. MTWThF 1:05–4:05
winter, 17

62. Water-Supply Engineering.—Continuation of course 61.

5 units, spring quarter (Marx) Lec. MWF 10; Dft. MT 1:05–4:05
spring, 11

63. Sanitary Engineering.—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitation problems, such as removal of sewage, destruction of garbage, construction, maintenance, and sweeping of streets and pavements. Prerequisite: course 62.

5 units, spring quarter (Marx) By arrangement
spring, 8

64. Construction of Canals, River and Harbor Improvements.—Lectures and designing as per arrangement. Prerequisites: Engineering 12 and Civil Engineering 51 and 52.

3 units, autumn, winter, and spring quarters (Marx) By arrangement

65. Technical Seminary.—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering.

3 units, autumn, *winter, and *spring quarters (Marx) By arrangement

Laboratory Fees.—Course 19, $1; 20, $3; 21, $4; 22, $2; 24, $2; 31, $1.50; 40, $3; 51, $2.

A Four-Year Curriculum in Civil Engineering

The following schedule assumes that the student enters with the

preparation specified under the department heading "Engineering" and the subhead, "A. Entrance Requirements."

[The asterisk (*) indicates that in special cases the department may accept, as a substitute for the course so marked, some other course.]

Department and No.	Subject	Units: Autumn	Winter	Spring
	First Year			
Engineering 1	Linear Drawing	1		
Engineering 2	Lettering	1		
C. E. 19	Map Reading	1		
	Language, Literature, or Formative Art		3	3
Appl. Math. 1*a*	Elementary Analysis	5		
Appl. Math. 1*b*	Elementary Analysis		5	
Appl. Math. 2*a*	Differential Calculus			5
	Citizenship	4	4	4
C. E. 20	Elementary Surveying	3		
C. E. 21	Advanced Surveying			4
Engineering 3	Descriptive Geometry		3	
		15	15	16
	Physical or Military Training	1	1	1
	Second Year			
Physics 1	General Physics	3	3	3
Appl. Math. 2*b*	Integral Calculus	5		
Appl. Math. 3*a*	Theoretical Mechanics		5	
Appl. Math. 3*b*	Theoretical Mechanics			5
	General History	3	3	3
C. E. 40	Railroad Surveying	4		
Geology 1	Dynamical Geology*		5	
M. E. 12	Machine Drawing*			3
		15	16	14
	Physical or Military Training	1	1	3
	Third Year			
English 2	English Composition	3	3	
	Language, Literature, or Formative Art			3
Engineering 10	Applied Mechanics	5		
Engineering 11	Applied Mechanics		5	
Engineering 12	Hydraulics			5
Min. & Met. 18	Iron and Steel	3		
C. E. 50	Elements of Design	3		
C. E. 51	Elements of Design		5	
C. E. 52	Elements of Design			5
Economics 3	Elementary Accounting	3		
M. E. 23	Testing of Engines*		3	
C. E. 30	Engineering Economics			3
		17	16	16
	Fourth Year			
C. E. 31	Engineering Estimates and Reports*			
C. E. 54	Structural Design*	5		
C. E. 55	Structural Design*		5	
C. E. 60	Water-Supply Engineering*	5		
C. E. 61	Water-Supply Engineering*		5	
C. E. 62	Water-Supply Engineering*			5
C. E. 63	Sanitary Engineering*			5
M. E. 36	Pumping Machinery*		3	
E. E. 2, 22	Electricity in Engineering*		3	
E. E. 3, 23	Electricity in Engineering*			3
		13	16	13

ELECTRICAL ENGINEERING

HARRIS JOSEPH RYAN, Professor.
JAMES CAMERON CLARK, Associate Professor.
HENRY HARRISON HENLINE, Assistant Professor.

[With the coöperation of Professor Moreno of the Department of Applied Mathematics.]

The department offers courses of instruction for three groups of engineering students:

I. GENERAL GROUP.—Courses 2, 3, 22, and 23, Electricity in Engineering, are offered especially for fourth-year students in civil, mining, and chemical engineering, without prerequisites.

II. DYNAMIC GROUP.—Courses 4, 5, 24, 25, 26, and 7, with Physics 2 as prerequisite, are open to all third- and fourth-year students and are offered especially for students in mechanical engineering.

III. ELECTROTECHNIC GROUP.—The department admits as major students only those who have been granted the Stanford A. B. degree in engineering and who have completed the department's courses 4, 5, 24, 25, 26, 7, and 8; and those graduates of other institutions who present corresponding credits. Major students are recommended for the degree of Engineer in Electrical Engineering upon satisfactory completion of Electrical Engineering courses 9, 10, 19, 40, and 41, Physics 8 and 16 and Applied Mathematics 8 (33 to 39 units), and electives as approved (6 to 21 units); total, 45 to 54 units.

2. Electricity in Engineering.—An abridged course in the industrial applications of electricity, intended for non-electrical engineering students. Prerequisites: First seven quarters of any of the Stanford engineering curricula and registration in Electrical Engineering 22.

2 units, winter quarter (CLARK) TTh 9
winter, 30

3. Electricity in Engineering.—Continuation of course 2. Prerequisites: courses 2 and 22, and registration in course 23.

2 units, spring quarter (CLARK) TTh 9
winter, 13

4. Direct Current Machinery.—Introductory study of direct current meters, machines, and auxiliaries. Prerequisites: Applied Mathematics 1, 2, 3; Engineering 1, 2, 3, 10, 11; Physics *2a, 2b, 2c, 2d,* and registration in Electrical Engineering 24.

2 units, spring quarter (HENLINE) TTh 8
spring, 50

5. Alternating Current Machinery.—Alternating current meters,

machines, and auxiliaries. Prerequisites: courses 4 and 24, and registration in course 25.

2 units, autumn quarter (HENLINE) TTh 8
autumn, 38

7. Electrical Engineering.—A course in general practice relating to equipment and methods as affected by the requirements of economics, reliability, and safety. Advised for mechanical engineers; required for electrical engineers. Prerequisites: courses 4, 5, 24, and 25.

3 units, winter quarter (RYAN) MWF 8
winter, 35

8. The Electric Circuit.—Class work, essentially a problem course. Prerequisites: courses 7 and 26.

3 units, spring quarter (CLARK) MWF 8
spring, 13

9. The Magnetic Circuit.—Class and problem work extending the studies begun in course 8. Prerequisites: courses 7 and 8.

3 to 5 units, autumn quarter (CLARK) By arrangement
autumn, 5

10. Advanced Electrotechnics.—A course developed with particular reference to the study of the problems of long-distance transmission of energy. Prerequisites: courses 26, 7, 8, and 9, and Applied Mathematics 8.

The course is given with the coöperation of the Department of Applied Mathematics.

4 units, winter quarter (CLARK, MORENO) By arrangement
winter, 5

11. Electrical Engineering Practice.—Guidance for the individual in the study of the Transactions of the American Institute of Electrical Engineers and other literature of practice.

5 units, spring quarter (RYAN) By arrangement
spring, 16

19. Seminar.—A weekly conference for the discussion of current electrical engineering literature and special topics. Open only to Electrical Engineering majors.

2 units, autumn, winter, and spring quarters (RYAN) By arrangement
autumn, 6; winter, 4; spring, 9

22. Electricity in Engineering.—A laboratory course to accompany course 2. Prerequisite: registration in course 2.

2 units, winter quarter (CLARK) T or Th, 1:05–4:05
winter, 30

23. Electricity in Engineering.—A laboratory course to accompany course 3. Prerequisite: registration in course 3.

2 units, spring quarter (CLARK) T or W, 1:05–4:05
spring, 13

24. Direct Current Machinery Laboratory.—To accompany course 4. Prerequisite: registration in course 4.

3 units, spring quarter (HENLINE) Lab. M or Th or F 1:05–4:05 or S 9–12
spring, 51 Quiz by arrangement

25. Alternating Current Machinery Laboratory.—To accompany course 5. Prerequisite: registration in course 3.

3 units, autumn quarter (HENLINE) MWF 1:05–4:05 or S 9–12
autumn, 35

26. Electrical Machinery Laboratory.—A course in the characteristic performance of standard electrical machinery and auxiliary apparatus. Prerequisites: courses 4, 5, 24, and 25.

4 units, winter quarter (HENLINE) MWF 1:05–4:05 or S 9–12
winter, 33 Quiz by arrangement

40. High Voltage Laboratory Practice and Research.—Open only to Electrical Engineering majors.

5 units, autumn quarter (RYAN) By arrangement
autumn, 6; winter, 5

41. Thesis.—Subjects as approved for individual Electrical Engineering majors.

4 units, winter quarter; 5 units, spring quarter (RYAN, CLARK, HENLINE)
winter, 5; spring, 7

The Stanford Branch of the American Institute of Electrical Engineers is an organization authorized by the Institute and maintained by the students for the discussion of the Journal of the Institute, and other topics.

LABORATORY FEES.—$1 per unit of university credit.

SYLLABUS FEES.—Applicable to Syllabus, lantern slides, and charts; 50c to $1 per course.

MECHANICAL ENGINEERING

†WILLIAM FREDERICK DURAND, WILLIAM RANKINE ECKART, EVERETT PARKER LESLEY, GUIDO HUGO MARX, Professors.

CHARLES NORMAN CROSS, Associate Professor.

LAWRENCE EDMINSTER CUTTER, HORATIO WARD STEBBINS, Assistant Professors.

ROBERT HENRY HARCOURT, JAMES BENNETT LIGGETT, THERON JAMES PALMATEER, EDWARD JOHN STANLEY, Teaching Specialists.

The following courses constitute the required work of a five years' curriculum leading to the degree of Mechanical Engineer. Students

† Absent on leave, 1921–22.

successfully completing the first four years of this curriculum with sufficient additional units for graduation will be granted the degree of Bachelor of Arts. It is expected that the supplementary courses necessary in order to obtain the number of units required for graduation will be elected in considerable degree among the other engineering courses offered in the department.

First Year.—Citizenship (12 units); Chemistry 1, 3, and *b* (9); Applied Mathematics 1*a*, 1*b*, and 2*a* (15); Shopwork: M. E. 1, 3, and 6 (12).

Second Year.—Foreign Language (9 units); Physics 2*a* and 2*b* (8); Machine Sketching and Elementary Machine Drawing: M. E. 11 and 12 (6); Descriptive Geometry: Engineering 3 (3); Mining and Metallurgy 18 (3); Applied Mathematics 2*b*, 3*a* and 3*b* (15).

Third Year.—History (9 units); Physics 2*c* and 2*d* (8); Applied Mechanics and Hydraulics: Engineering 10 and 12 (10); Shopwork: M. E. 7 (4) Machine Design: M. E. 13 (8); English Composition 6.

Fourth Year.—Machine Design: M. E. 14 (8); Mechanical Laboratory: M. E. 21†, 22, and 23 (9); Technical Reports: M. E. 31 (3); Heat Engines: M. E. 32 and 33 (8); Electrical Machinery: E. E. 4, 5, 24, and 25 (10); Electrical Engineering: E. E. 7 and 26‡ (7).

Fifth Year.—Shop administration: M. E. 10 (4); Advanced Machine Design: M. E. 16 (4); Mechanical Laboratory Work: M. E. 24, 25 (6); Applied Thermodynamics: M. E. 34 (4); Central Power Stations: M. E. 35 (3); Hydraulic Machinery and Power Stations: M. E. 35*b* (5); Pumping Machinery: M. E. 36 (3).

The above courses represent the requirements for the student entering with full entrance credit, including 1½ units in algebra, 1 unit in plane geometry, ½ unit in trigonometry, 1 unit in physics, 1 unit in chemistry, 2 units in one foreign language, 1 unit in history, 1 unit in biological or general science, ½ unit in mechanical or geometrical drawing, and ½ unit in woodworking. For those not bringing this measure of entrance credit the requirements will be correspondingly greater. There will be, in the usual case and especially for the student carrying more than the normal number of 15 units registration, a considerable amount of additional time for elective work in the various engineering departments or in other departments of the University. Students whose preparatory records show excellence, not only in mathematics and chemistry, but also in general training, may, with the approval of the instructor, omit Applied Mathematics, 1*a*, 5 units, and Chemistry 1,

† This course is elective for students who take 7 units of E. E. 7 and 26.
‡ Four units of this course is elective for those who take M. E. 21.

3 units, from the first year's required course, thus making 8 units available for electives.

COURSES OFFERED

1. Forge Practice.—Three laboratory periods and one lecture per Required of Mechanical Engineering students.

4 units, autumn, *winter, and *spring quarters (HARCOURT) Lec S 9
autumn, 26; winter, 14; spring, 15

3. Foundry Practice.—Three laboratory periods and one lecture per week, one quarter (4 units), required of Mechanical Engineering students.

4 units, autumn, *winter, and *spring quarters (LIGGETT) Lec. S 8
autumn, 24; winter, 10; spring, 12

5. Woodworking (prerequisite for M. E. 6).—Three laboratory periods per week. One quarter (3 units) required of students not having entrance credit in woodworking.

3 units, autumn, *winter, and *spring quarters (STANLEY)
autumn, 12; winter, 6; spring, 3

6. Pattern Making.—Three laboratory periods and one lecture per week. One quarter (4 units) required of Mechanical Engineering students.

4 units, autumn, *winter, and *spring quarters (STANLEY) Lec. S 8
autumn, 32; winter, 16; spring, 15

7. Elementary Machine Shop Practice.—Two laboratory periods and two lectures per week. Intended for upperclassmen only. One quarter (3 units) required of Mechanical Engineering students. Prerequisites: M. E. 1 and 3.

4 units, autumn, *winter, *spring, and *summer quarters (PALMATEER)
winter, 23; spring, 22; summer, 17 Lec. S 9

8. Advanced Machine Practice.—One to four laboratory periods per week. Prerequisite: M. E. 7.

1 to 4 units, autumn, *winter, *spring, and *summer quarters (PALMATEER)
winter, 10; spring, 10; summer, 7 Lec. T 11

10. Shop Administration.—A course of lectures on workshop organization and administration, factory accounting, wage system, selection of machinery, factory methods, etc. Prerequisites: courses 1 to 7 inclusive.

4 units, winter quarter (LESLEY) MTWTh 10
winter, 8

11. Freehand Machine Drawing.—Practice in making freehand sketches of machine parts, and their dimensioning in practical form for use in the shop, the sketches being made according to the principles of orthographic projection. The aim is to train the student in the reading of machine drawings through making a considerable number of sketches

from actual machines and machine parts, and at the same time to familiarize him as much as possible with the actual machine parts. Open to all students, and required of students in Mechanical Engineering. (Nine hours a week.)

3 units, autumn and *spring quarters (CUTTER) MTWThF 1:05–4:05
autumn, 36; spring, 24

12. Elementary Machine Drawing.—Practice in making working drawings of machine parts, and in making tracings from these drawings. The purpose of the course is not only to train the student in the technique of drafting and dimensioning, but also to familiarize him with the elements of machines, and, therefore, no drawings are made from copy, but all are made from the student's own sketches of the actual model. (Six or nine hours a week in drafting room; three hours work for one unit credit.) Prerequisites: courses 1, 2, and 3 in Engineering, or their equivalent, and, for Mechanical Engineering students, course 11 in Mechanical Engineering.

2 or 3 units, autumn and *spring quarters (CUTTER) MTWThF 1:05–4:05
autumn, 33; spring, 66

13. Elementary Machine Design.

a. Function of machines; motion, force, and work in machines; analysis of mechanism; velocity, acceleration, and effort diagrams; parallel motions; cams; ratchets; toothed wheels; valve gear analysis and design. The aim is, not merely to present a course in pure mechanism, or kinematics, but also—by the introduction of the consideration of force, work, and energy, as well as motion—to show the purposes for which the mechanisms are used and the manner in which they function. (Three hours a week, lectures and recitations, winter and spring quarters.) (3 units.)

b. Drafting course applying the principles treated in *a.* (Three hours a week drafting, winter and spring quarters.) (1 unit.) Prerequisites: course 12 in Mechanical Engineering and courses 1, 2, 3, and 4 in Engineering. Courses *a* and *b* must be taken together and are required of students in Mechanical Engineering.

4 units, winter and spring quarters (G. H. MARX)
winter, 65; spring, 67 Lec. MWF 8; Dft. W 1:05–4:05

14. Machine Design.—Study of machine elements, such as bolts and screws; riveted joints and boiler design; keys, fits and fitting; axles, shafts, and spindles; journals, bearings, friction, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear, belt, rope, and chain transmission systems; flywheels; brakes; springs; frames and supports; cylinders, etc.; leading to the design of complete simple machines. (Two hours a week recitations and lectures, six hours

in the drafting-room, throughout the year.) Open to students who have completed course 13 in Mechanical Engineering, and who are taking courses 10 and 11 in Engineering; two quarters required of students in Mechanical Engineering.

4 units, autumn, winter, and spring quarters (G. H. Marx)
autumn, 34; winter, 32; spring, 4 Lec. TTh 8; Dft. TTh 1:05–4:05

16. Advanced Machine Design.—Design of complete machines. Students may elect machine tools; cranes, steam or gas engines, or special problems. (One lecture and nine hours drafting per week.) Intended for fifth-year students who have completed courses 14, 32, and 33.

4 units, autumn quarter (G. H. Marx, Cutter)
Lec. F 10; Dft. 1:05–4:05 by arrangement

21. Valuation of Fuels and Oils for Engineering Purposes.—Includes determinations of the proximate analysis of coal; the calorific value of coals, fuel oils, and gas; the moisture contents of fuel oils; the density, viscosity, flash, burning, and chill points of oils, and the coefficient of friction of lubricated bearings. (One lecture, three hours in the laboratory, and five hours on reports per week.) Open to students who have completed courses Chemistry 1 and *b*, Physics 2*a* and 2*b*, or 3*a* and 3*b*. Required of students in Mechanical Engineering. (Elective for students who take 7 units of courses E. E. 7-26.)

3 units, autumn quarter (Stebbins) Lec. F 8; Lab. 1:05–4:05 by arrangement
autumn, 34

22. Calibration and Use of Engineering Instruments.—Including thermometers, gas and steam meters, planimeters, steam engine indicators, absorption brakes, transmission dynamometers, steam calori meters, and flue gas analysis. (One lecture, three hours in the laboratory, and five hours on reports per week.) Open to students who have completed Chemistry 1 and *b*, Applied Mathematics 2*b*, and Physics 2*a* and 2*b*, or 3*a* and 3*b*. Required of students in Mechanical Engineering.

3 units, autumn and winter quarters (Stebbins)
autumn, 4; winter, 17 Lec. Th 9; Lab. 1:05–4:05 by arrangement

23. Testing of Engines, Boilers, and Compressors.—Includes valve setting, mechanical efficiency, and economy tests of steam engines, tests of steam turbines, gas engines, boilers, and air compressors. (One lecture, three hours in the laboratory, and five hours on reports per week.) Open only to students who have completed Mechanical Engineering 32 (the first quarter of Heat Engines, 4 units); required of students in Mechanical Engineering.

3 units, winter quarter (for majors other than M. E.), and spring quarter (for M. E. majors) (Stebbins) Lec. Th 9; Lab. 1:05–4:05 by arrangement
winter, 33; spring, 32

24. Testing of Hydraulic Machinery.—Includes tests of centrifugal, rotary, jet, and steam pumps, pulsometers, hydraulic rams, water wheels

and hydraulic turbines. (One lecture, three hours in the laboratory, and five hours on reports per week.) Open to students who have completed Engineering 12*b* and Mechanical Engineering 23 and 32.

3 units, autumn quarter (ECKART) Lec. Th. 8; Lab. 1:05–4:05 by arrangement
autumn, 18

25. Testing of Heat Exchangers and Power Plant Auxiliaries.—Includes tests of feed water heaters, economizers, condensers, injectors, blowers, turbo-compressors and refrigerating machinery. (One lecture, three hours in the laboratory, and five hours on reports per week.) Open to students who have completed courses 23 and 24.

3 units, winter quarter (ECKART) Lec. T 8; Lab. 1:05–4:05 by arrangement
winter, 6

26. Testing of a Complete Power Plant.—A comprehensive test which reviews and coördinates the work of courses M. E. 21, 22, 23, 24, and 25. The work includes the planning and arranging of all details, the calibration of all instruments, preliminary runs for valve and other adjustments in accordance with the code of the A. S. M. E. A final report to be made by the section as a whole, copies being prepared for each student and one for the laboratory files. Open only to students who have completed M. E. 22, 23, 24, and 25; will not be given unless at least six students register.

2 units, spring quarter (ECKART) By arrangement

28. Aerodynamic Laboratory.—Experimental investigation of airplane propellers and other aerodynamic problems.

3 units, autumn, *winter, and *spring quarters (LESLEY) By arrangement
autumn, 2; winter, 3; spring, 2

30. Experimental Investigation of Mechanical Engineering Problems.—Open to all students who have completed courses 21, 22, and 23 and whose work has indicated their ability to carry on successfully advanced work of this nature.

3 to 6 units, autumn, *winter, and *spring quarters (ECKART, STEBBINS)
autumn, 2; winter, 3; spring, 2

31. Engineering Reports and Specifications.—Practice writing, with occasional lectures. Required of fourth-year students in Mechanical Engineering.

3 units, autumn and *spring quarters (LESLEY) Lec. TTh 9
autumn, 15; spring, 22

32. Heat Engines.—Mechanical theory of heat and its applications. Fourth-year students in Mechanical Engineering.

4 units, autumn quarter (CROSS) Lec. MWF 10; office work as arranged
autumn, 77

33. Heat Engines.—Continuation and application of course 32. (Three lectures and three hours office work per week.) Required of fourth-year students in Mechanical Engineering.

4 units, winter quarter (CROSS) Lec. MWF 10; office work as arranged
winter, 46

34. Applied Thermodynamics.—Continuation of courses 32, 33. Irreversible operations, flow of gases and vapors, design of turbine nozzles. Application of thermodynamic theory to advanced and special problems. Prerequisite: course 32. Required of fifth-year students in Mechanical Engineering. (Two lectures and three hours' office work per week.)

4 units, spring quarter (CROSS) Lec. MWF 10; office work as arranged
spring, 7

35. Central Power Stations.—Study of the principal problems presented by the design and operation of modern central power stations driven by heat prime movers. (Two lectures and three hours' office work per week.)

3 units, autumn quarter (DURAND) Lec. TTh 9; office work as arranged
autumn, 22

35b. Hydraulic Machinery and Power Stations.—Elements of hydraulic machinery with special reference to prime movers. Elements of the design of hydraulic power stations with special reference to modern hydroelectric practice; general control of water in tunnels and penstocks, surge chamber, control of surges and shocks, valves and regulating devices, penstocks and their installation, selection of units, characteristics of impulse and reaction types, speed regulation, installation tests, and special problems. Prerequisite: Engineering 12. (Four lectures and three hours' office work per week.)

5 units, spring quarter (ECKART) Lec. MTWTh 9; office work as arranged

36. Pumping Machinery.—Discussion of the principal problems arising in the design and operation of pumping machinery of various types, direct, centrifugal, rotary, propeller; and for various purposes, general service, boiler feed, fire service, mine drainage, irrigation, municipal supply, oil line service, etc. (Two lectures and three hours' office work per week.) Prerequisites: courses 32, and Engineering 12.

3 units, winter quarter (DURAND) Lec. TTh 9; office work as arranged
winter, 36

40. Theory of Flight.—Discussion of elementary principles and application to the chief problems arising in the theoretical discussion of the flight of air-craft heavier than air. (Two lectures, with collateral problems.)

2 units, winter quarter (DURAND)
winter, 12

Thesis.

5 units (ECKART)
autumn, 2; winter, 2; spring, 2; summer, 2

FEES: Courses 1, 3, 7, $10 each; courses 5, 6, $8 each; course 8, $2 per credit hour; course 26, $3; courses 21, 22, 23, 24, and 25, $5 each; course 30, $1.50 per credit hour; courses 35, 36, 50c each.

ENGLISH

Raymond Macdonald Alden, William Herbert Carruth, John S. P. Tatlock, Professors.

Charles Grosvenor Osgood, Robert Kilburn Root, Acting Professors (Summer Quarter).

William Dinsmore Briggs, Henry David Gray, Samuel Swayze Seward, Jr., Associate Professors.

Howard Judson Hall, Arthur Garfield Kennedy, Frances Theresa Russell, Assistant Professors.

†Margery Bailey, Archibald Donald Douglas, Edith Ronald Mirrielees, Instructors.

Claire Soulé Seay, Assistant in Instruction.

Requirements for the Degree of Bachelor of Arts

a. The courses ordinarily prescribed in the major subject include Chaucer, Shakespeare (Courses 25 and 59), the advanced courses (81, 82, 83, 84) in the History of English Literature (four quarters), and an advanced course in a single author (as Milton, Wordsworth, or Spenser), besides such preliminary courses in composition, vocal expression, or literature as may be advised in individual cases. In the advanced courses in English Literature one of two substitutions may be made: (*a*) for course 82, the course in Elizabethan Drama (70); or (*b*) for course 83, the course in Modern English Fiction (68). (For the requirements in the case of students making English their major subject with special reference to public speaking or journalism, see below under the Divisions of Public Speaking and Journalism.)

b. It is required also that each student pursue work in one foreign language and literature sufficiently for the accomplishment of two ends, (1) a practical reading knowledge of the language chosen, and (2) some acquaintance with its most important literature. This requirement is not primarily a matter of formal credit-hours, but will ordinarily be found to demand a minimum of 24 units of college work in the chosen language, aside from elementary courses (two years in the high school or one in the University). Students should be sure that their language studies are so planned as to accomplish the ends desired. Introductory courses in Latin and Greek, if pursued in the University, will be counted as college work. Those who make Latin or Greek their principal language are advised, in general, to include two years of work in a modern language among their elective studies; and those

† Absent on leave, 1920–21.

who have chosen a modern language are encouraged to include among their elections two years of work in Latin or Greek.

c. A course in English History is also prescribed for those who have not had a separate course in the subject in the high school.

The Teacher's Recommendation.—The High School Teacher's Certificate is granted by the State to students who have fulfilled the State requirements as set forth in the *Information* Bulletin, involving for applicants without experience one full year of graduate study. Recommendation by the department is granted by vote to students whose work has been of high character. It should be distinctly understood that a mere passing grade does not entitle a candidate to the endorsement of the department. For major students of the department the courses prescribed, in addition to those required for the degree of A. B., are the History of the English Language (56), Versification (99), Teachers' English (98), and graduate courses amounting to not less than nine units. For the courses required of students of other departments who seek a recommendation in English, as a major or minor subject, see the *Announcement of the School of Education.*

Advanced Degrees

The candidate for the Master's degree in English must have: (1) The equivalent of the requirements for the A. B. degree in English; (2) an elementary knowledge of Old English; and (3) a reading knowledge of two foreign languages (preferably one ancient and one modern). The work for the degree must occupy at least one full year of graduate study in residence, the greater part in English, the remainder in related fields. The courses in English will be divided between the earlier and later periods. The candidate must present a thesis prepared under the direction of a member of the department and demonstrating the candidate's power of concentrated, independent study; this thesis may be accepted in lieu of not more than nine units of the work in the course.

For the conditions of acquiring the Doctor's degree, see the *Graduate Study* Bulletin.

Preliminary and General Courses

[In general, courses 9–15 are open to first-year students; courses 22–29 are open to second-year students.]

A. Elementary Composition.—A one-quarter course required of all first-year undergraduates who do not pass the matriculation test in English.

1 unit, autumn, *winter, *spring, and summer quarters (Seward, Bonner, Campbell, Carbaugh, Davis, Hedrick, Manners, Seay)

TThS 8; MWF 8, 9, 1:05

autumn (4 sections), 21, 20, 28, 26; winter (5 sections), 24, 19, 17, 16, 22; spring (6 sections), 24, 23, 21, 24, 16, 18; summer, (3 sections), 28, 26, 31

[For each student in course A, except in case of those who meet the requirement within a short time, a fee of $10 is charged.]

2. English Composition.

a. Narration and Description.

b. Exposition.

3 units, any two quarters (Seward, Hall, Davis, Douglas, Seay, and others) TThS 8, MWF 8, 9, 1:05

autumn (5 sections), 25, 34, 21, 30, 19; winter (4 sections), 30, 28, 30, 25; spring (4 sections), 21, 42, 19, 24; summer, 26

8. Outline History of English Literature.—A condensed chronological survey, designed primarily for second-year students who intend to make English their major subject.

5 units, autumn quarter (Douglas) MTWThF 11

autumn; 27

9. American Literature.—Not open, except by special permission, to students having entrance credit in American literature.

5 units, autumn quarter (Hall) MTWThF 8

autumn, 49

10. English Classics.—A study of representative works of important English writers, with assigned reading and writing. May be taken two quarters, to the extent of eight units of credit. Open to other than first-year students only by permission.

3 units, autumn, spring, and *summer quarters; 5 units, winter quarter (Carruth, Russell, Douglas, Mirrielees) (autumn, spring) MWF 9; (winter) MTWThF 11; (summer) MWF 11

autumn, 42; winter, 76; spring, 83; summer, 67

11. Introduction to Poetry.—A study of the nature, methods, and forms of poetry, with exercises in analysis and interpretation. Open to students of all departments; to seniors only with reduced credit.

3 units, winter quarter (Seward); 5 units, spring quarter (Alden)

winter, 14; spring, 55

13. Free Reading.—Eight hours of reading weekly, with informal class reports and discussion. The course furnishes an opportunity for students to read books with which they should be familiar but which are not assigned in connection with their other courses. Open to a limited number of upper-class students from other departments; not to English majors. May not be taken for more than two quarters.

2 units, any quarter (Alden, Briggs, Brown, Carruth, Gardner, Foster, Gray, Lothrop, Martin, Mirrielees, Russell, Seward, Sutliff, Trotter) MT 4, 5

autumn (7 groups), 8, 12, 9, 7, 8, 7, 6; winter (5 groups), 6, 36, 5, 9, 6; spring, (7 groups), 7, 40, 8, 8, 6, 6, 5

14. Tennyson.—A study of selected portions of Tennyson's poems, illustrating the growth of his literary art. A general course, designed for first- and second-year students, and open to third- and fourth-year students by permission only.

4 units, one quarter (Hall) [Not given in 1920–21]

16. Advanced Composition.—A course intermediate between the elementary and the more specialized branches of written expression. Practice in various forms, with formulated criticism and illustrative reading.

4 units, autumn and winter quarters (Russell) MTWF 9
autumn, 22; winter, 17

22. Victorian Prose.—A study of selected Victorian prose writers.
3 units, autumn quarter (Seward) MWF 9
autumn, 19

23. Victorian Poetry.—A study of selected Victorian poets.
3 units, winter quarter (Seward) MWF 9
winter, 10

24. English Bible.—Representative portions of the Old Testament studied as literature.
3 units, autumn quarter (Gray) MWF 10
autumn, 22

25. Shakespeare.—An introduction to Shakespeare, with rapid reading of a considerable number of the plays in chronological sequence. Open to all second-year students; continued, for third- and fourth-year students, in course 59.
4 units, winter quarter (Alden) MTWF 10
winter, 42

26. Types of Narrative Literature.
3 units, spring quarter (Seward) MWF 10
spring, 12

27. Browning.—An introductory course, open to all students.
3 units, summer quarter (Russell) MWF 11
summer, 15

Advanced and Special Courses

[Unless otherwise specified, the following courses are open to third-year and fourth-year students of all departments.]

31. Exposition.—An advanced course, intended primarily for students in scientific and professional lines. Special attention will be given to students preparing theses or other papers. Prerequisite: course 2 or equivalent.
3 units, autumn quarter (Hall) MWF 8
autumn, 4

32. Argumentation.—The theory of argumentation, with practice in the preparation of briefs and in the writing of arguments, together with a critical analysis of argumentative masterpieces. Open to all students who have made a satisfactory grade in English 2.
5 units, winter quarter; 2½ units, summer quarter (McClintock)
winter, 18; summer, 20 MTWThF 10

34. Dramatic Composition.—The principles of dramatic writing developed in connection with the student's own work. Enrollment limited;

students must submit specimens of their work in advance. May be taken for any quarter or throughout the year.

3 units, autumn, winter, and spring quarters (GRAY) MWF 9
autumn, 8; winter, 10; spring, 10

35. Prosody and Verse Writing.—Study of lyric poems, with practical exercises in the same. Open by permission to second-year students who have had six units in English composition.

3 units, spring quarter (CARRUTH) MWF 10
spring, 19

36. Short Story Writing.—Practice in the writing of short stories, and a study of the principles governing their composition. Open to students who have completed two quarters of English 2.

5 units, spring quarter (MIRRIELEES) MTWThF 9
spring, 21

37. Essay Writing.—Preparation of magazine articles, criticisms, and papers of both informal and analytical character. Prerequisite: course 2.

4 units, spring quarter (RUSSELL) MWF 9
spring, 24

54. The Short Story.—A study of the short story in English, with especial attention to its development during the nineteenth century.

3 units, spring quarter (MIRRIELEES) MWF 8
spring, 67

55. Old English.—Elements of Old English grammar, with reading exercises.

4 units, winter quarter (KENNEDY); summer quarter (TATLOCK) MWThF 10
winter, 14; summer, 6

56. The History of the English Language.

3 units, spring quarter (KENNEDY) MWF 10
spring, 17

57. Elements of the English Language.

2 units, summer quarter (2d half) (ROOT) TWThF 11
summer, 19

58. Chaucer.—An elementary course, including an outline of Middle English grammar for the beginner. Open to third-year students who have a reading knowledge of one foreign language.

3 units, winter quarter (KENNEDY) MWF 1:05
winter, 42

59. Shakespeare.—A continuation of course 25, devoted to the more intensive study of a few plays. Designed primarily for English major students in their third year; open to others on recommendation from course 25.

3 units, one quarter (ALDEN, GRAY) [Not given in 1920–21]

60. Spenser.

3 units, one quarter (BRIGGS) [Not given in 1920–21]

61. Milton.

3 units, spring quarter (BRIGGS) MWF 10
spring, 33

62. Wordsworth.
3 units, autumn quarter (HALL) MWF 9
autumn, 7

63. Browning.—Either "The Ring and the Book" or a selection from the dramas and longer poems (the shorter poems being studied in course 27).
3 units, autumn quarter (RUSSELL) MWF 10
autumn, 20

65. Introduction to Comparative Literature.—An exposition of the comparative method in literary study, with a survey of the distribution of types in world literature. Open to third-year and fourth-year students who have had not less than fifteen units in English literature.
3 units, autumn quarter; 5 units, summer quarter (CARRUTH) TThS 9
autumn, 9; summer, 13

66. National Epics.—Reading in translation of the Mahabharata, the Iliad, the Aeneid, the Beowulf, the Song of Roland, the Nibelungenlied, and the Kalewala. Open also to graduates.
4 units, one quarter (CARRUTH and others) [Not given in 1920–21]

67. The History of Prose Fiction.—Including the beginnings of English fiction to DeFoe.
3 units, one quarter (CARRUTH) [Not given in 1920–21]

68. English Fiction.—A course in the history of English fiction from DeFoe through the major novelists of the nineteenth century.
5 units, one quarter (BRIGGS) [Not given in 1920–21]

69. The Modern Novel.—Lectures on European fiction from 1856 to the present time, with the reading of representative novels and reports upon them. Open to third-year and fourth-year students of all departments.
5 units, one quarter (GRAY) [Not given in 1920–21]

70. The English Drama to 1642.—The beginnings and development of the drama.
5 units, one quarter (BRIGGS) [Not given in 1920–21]

71. Modern Drama.—A study of Ibsen and of contemporary dramatists.
5 units, winter quarter (GRAY) MTWThF 9
winter, 35

73. Contemporary Poetry.—A survey of English and American poetry since 1890, with especial attention to the poetic revival of the present time.
3 units, one quarter (GRAY) [Not given in 1920–21]

74. The English Essay.—A study of the Essay as a type, from Bacon to the twentieth century.
3 units, autumn quarter (RUSSELL) MWF 10
autumn, 23

75. Contemporary Essayists.—An examination of such writers as have made a distinctive contribution to present-day thought. Lectures and assigned readings.

3 units, winter quarter (Russell) MWF 9
winter, 9

80. Old English Literature to 1066.—Survey with lectures and reading in translation.

3 units, one quarter (Kennedy) [Not given in 1920–21]

81. Medieval Literature, with special reference to Middle English.—Special attention is paid to the literary relations of England and France from the Anglo-Saxon period to the sixteenth century. The course will serve as a general introduction to medieval European literature, which is studied by types: romances, histories, visions, lyrics, fabliaux, etc. This course is continued in No. 109.

4 units, autumn quarter (Tatlock) MTWF 11
autumn, 54

82. English Literature from 1557 to 1700, exclusive of the Drama.—Primarily for fourth-year students of the English Department.

4 units, winter quarter (Briggs) MWThF 11
winter, 38

83. English Literature from 1700 to 1780.—Primarily for third-year students of the English Department.

4 units, winter quarter (Hall) MTWF 11
winter, 24

84. English Literature from 1780 to 1832.—A continuation of course 83.

4 units, spring quarter (Alden) TWThF 11
spring, 46

86. Criticism (Undergraduate Seminary).—A course in the practical analysis and valuation of recent literature; book reviews and discussions. Limited to eight seniors, admitted from any department on recommendation.

3 units, autumn and winter quarters (Alden) MTh 2:05–3:40
autumn, 8; winter, 3

[The following courses are designed for both graduate and advanced undergraduate students; with the exception of course 98, they are accepted as graduate courses in the program of candidates for advanced degrees.]

87. The Life and Thought of the 16th and 17th Centuries.—For seniors and graduates of all departments.

4 units, winter and spring quarters (Briggs) M 2:05–4:05
winter, 10; spring, 6

88a. Johnson and his Circle.

2 units, summer quarter (1st half) (Osgood) TWThF 9
summer, 19

88b. Eighteenth Century Classicism.
2 units, summer quarter (2d half) (Root) TWThF 9
summer, 17

89. American Colonial Literature.—A research course. Prerequisites: American History and 18th Century English Literature.
2 units, winter quarter (Hall) TTh 2–4
winter, 2

90. American Poetry, exclusive of the Drama.—A study of the greater American poets with especial reference to their relation to English and Continental literature.
4 units, one quarter (Carruth) [Not given in 1920–21]

93. Beowulf.
4 units, one quarter (Kennedy) [Not given in 1920–21]

94. Middle English Readings.
3 units, autumn quarter (Kennedy) MWF 1:05
autumn, 4

95. The Bible in Early English.—Lectures with readings in translation.
3 units, spring quarter (Kennedy) By arrangement
spring, 3

96. Ballads.
4 units, one quarter (Briggs) [Not given in 1920–21]

97. Ideal Commonwealths.—A study of the Utopian idea and related social and political conceptions, as expressed in literature.
3 units, winter quarter (Russell) MWF 10
winter, 10

98. Teachers' Course in English.—A study of the methods of teaching composition and literature in secondary schools.
3 units, winter and spring quarters (Seward) T 10; Th 2–4
winter, 11; spring, 10

99. Versification.—An introduction to the theory of rhythm and meter, the history of English prosody, and the problems of reading and teaching verse. Open to fourth-year students and graduates; to third year students by special permission.
3 units, autumn quarter (Alden) MWF 10
autumn, 18

GRADUATE COURSES

101. Introduction to English Philology and Bibliography.
3 units, autumn quarter (Kennedy) MWF 9
autumn, 14

102. Satire.—A study of the satiric element in literature, exemplified by some particular phase selected for specialization.
4 units, one quarter (Russell) [Not given in 1920–21]

103. Tragedy.—A comparative study of the theory and practice of tragedy in various literatures.

4 units, two quarters (ALDEN) [Not given in 1920–21]

104. Comedy.—An inquiry into the nature of the comic and into its literary uses, as exemplified especially in the drama.

4 units, one quarter (SEWARD) [Not given in 1920–21]

105. Elizabethan and Seventeenth Century Lyric.—Special emphasis is laid on the sonnets of Shakespeare and his contemporaries, and on the religious lyric of the age of Herbert.

4 units, one quarter (ALDEN) [Not given in 1920–21]

106. Critical Theories.—A study of the principal critical writings of the age of Coleridge, with special reference to the theory of poetry.

3 units, one quarter (ALDEN) [Not given in 1920–21]

107. Tennyson.—The Idylls of the King compared with their sources.

3 units, summer quarter (CARRUTH)
summer, 14

108. The Hildebrand Theme in General Literature.—A study of the sources and migration of epic themes.

3 units, spring quarter (CARRUTH) MWF 11
spring, 2

109. Medieval Literature.—A continuation of course 81, but may be taken by students who have not had the latter. Especial attention is paid to Dante and Chaucer.

3 units, spring quarter (TATLOCK) By arrangement
spring 14

110. Chaucer (advanced course).—The Canterbury Tales, or the Troilus, will be studied, with attention to the structure and history of the work and its literary significance. Open to fourth-year students.

4 units, autumn and summer quarters (TATLOCK) By arrangement
autumn, 7; summer, 8

111. Shakespeare.—An introduction to the bibliography of the subject, the history of the text, and methods of critical study.

4 units, autumn quarter (ALDEN) MWF 11
autumn, 9; winter, 1

112. Shakespeare.—A critical study of one or more plays. In 1920–21, Hamlet.

4 units, spring quarter (GRAY) M 2:05–4:05, and a third hour by arrangement
spring, 12

113. Marlowe.

4 units, one quarter (BRIGGS) [Not given in 1920–21]

114. Jonson.

4 units, two quarters (BRIGGS) [Not given in 1920–21]

115. Elizabethan Drama Seminary.—For 1920–21, Beaumont and Fletcher.

3 units, autumn quarter (GRAY) M 2:05–4:05
autumn, 6

117. Journal Club.—Reports on current literature by the members of the class.

2 units, winter and spring quarters (CARRUTH, KENNEDY) TTh 2:05
winter, 6; spring, 10

118a. Early English Seminary.—Legendary history of Britain.

3 units, one quarter (TATLOCK) [Not given in 1920–21]

118b. Early English Seminary.—The Siege of Troy in English Literature.

3 units, one quarter (TATLOCK) [Not given in 1920–21]

120. The Renaissance and Spenser.

2 units, summer quarter, 1st half (OSGOOD) TWThF 11
summer, 19

Thesis.

winter, 7; summer, 3

DIVISION OF PUBLIC SPEAKING

LEE EMERSON BASSETT, Professor.

ELISABETH LEE BUCKINGHAM, GORDON ARTHUR DAVIS, MILLER L. MCCLINTOCK, Instructors.

GENEVIEVE APGAR, ESTHER L. PAUL, Assistants in Instruction.

Students who give evidence of special aptitude for the subject may elect English as their major department in special preparation for professional work in the practice or teaching of public speaking. Such students will register with the members of this Division as their advisers; they will meet the same requirements as other major students in English (see page 180 above), except that they may substitute work in public speaking, to the amount of 8 units, for advanced courses in literature. Those who wish special training for public speaking and platform work will ordinarily be expected to complete courses 4, 5, 7, 19*a*, 32, 49, 50, and 52; those expecting to teach the subject, courses 4, 5, 19*a*, 19*b*, 21, 32, 49, 51, 52, 53.

[NOTE: *All courses in public speaking are open to but a limited number of students.* Application should be made on registration day, and the instructor reserves the right to refuse to enroll students who do not appear at the first meeting of the class. In general, courses 4 to 7 are open to first-year students; courses 19*a* to 21*b* and (for students recommended from course 7) 50, to second-year students.]

4. Vocal Expression.—A study of the principles of oral expression and the vocal interpretation of masterpieces in prose and poetry, with sup-

plementary work in voice development. Each student is expected to memorize and vocally interpret 350 lines of Shakespeare during the quarter. Two sections.

4 units, autumn, *winter, and *spring quarters (Apgar, Seay, Paul) TWThF 8, 11
autumn (2 sections), 21, 14; winter (2 sections), 18, 17; spring (2 sections), 25, 24

5. Reading Aloud.—The oral rendering of various forms of literature. Particular attention will be given to rhythm, time, melody, quality, and other musical elements of verse. Assignments for general class practice and for individual study and rendition. Prerequisite: course 4, or its equivalent.

3 units, autumn, *winter, and *spring quarters (Paul, Seay) MWF 9
autumn, 15; winter, 10; spring, 20

6. Practical Phonetics.—A course in the enunciation and pronunciation of the English language. Designed especially for foreign students.

1 unit, winter and spring quarters (Bassett) T 1:05
spring, 11

7. Extemporaneous Speaking.—Practice in extemporaneous speaking on subjects of current interest, with attention to the preparation of speech outlines. Should preferably be preceded by course 4. Two sections.

3 units, autumn, *winter, and *spring quarters (Bassett, McClintock, Apgar) MWF 8, 9, 10
autumn (3 sections), 13, 22, 17; winter (2 sections), 21, 19; spring (3 sections), 19, 20, 19

19a. Vocal Interpretation.—The oral interpretation of literature, both prose and poetry. Prerequisite: courses 4 and 5.

3 units, spring quarter (Bassett) MWF 1:05
spring, 20

19b. Vocal Interpretation: Dramatic Literature.—The study of short plays of literary and dramatic merit for presentation before the class. Parts will be assigned. Attention will be given to characterization and action.

3 units, winter quarter (Davis) T 1:05; Th 1:05–3:05
winter, 21

20. Practical Debate.—Under supervision of the department those students who work on intercollegiate debate questions may receive credit upon satisfactory completion of the work.

1 or 2 units, any quarter except summer (McClintock) By arrangement
winter, 9; spring, 2

21a. The Theater.—An historical survey of the origin and development of the theater, its social function and significance, and a study of various kinds of theaters.

3 units, winter quarter (Davis) T 1:05; Th 1:05–3:05

21b. Theatrical Workshop.—A theatrical laboratory for advanced students in the production of one-act plays for public presentation. Particular attention will be given to the construction and designing of stage scenery, and to costuming, lighting, acting, and stage direction.

3 units, spring quarter (Davis) T 1:05; Th 1:05–3:05
spring, 22

33. Court Room Forensics.—An analysis of forensic masterpieces together with practice in the organization and presentation of court room speeches. Open to fourth-year law students who have a satisfactory grade in courses 7 and 32.

3 units, spring quarter (McClintock) [Not given in 1921–22]
spring, 9 W 1:05; F 2:05–4:05

49. Voice Training.—Lectures on the voice, with class exercises.

1 unit, autumn quarter (Bassett) T 1:05
autumn, 27

50. Public Speaking.—Practice in the preparation and delivery of speeches adapted to various audiences and occasions, with attention to the style of spoken discourse. Prerequisite: course 7.

3 units, winter and spring quarters (Bassett, McClintock) MWF 10
winter (2 sections), 4, 18; spring, 19

51. Public Reading.—A course in the preparation of poems, stories, and scenes from novels and plays for public presentation. Prerequisites: courses 4, 5, 19*a*, and 19*b*.

2 units, autumn and winter quarters (Bassett) T 2:05–4:05
autumn, 15; winter, 9

52. Oral Debate.—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Prerequisite: course 32.

2 units, spring quarter (McClintock) W 2:05–4:05
spring, 6

53. Teachers' Course in Oral Expression.

2 units, spring quarter (Bassett) T 2:05–4:05
spring, 9

DIVISION OF JOURNALISM

Everett Wallace Smith, Associate Professor.
Paul Hibbert Clyde, Instructor.
John Jay Cuddy, Lecturer in Advertising.

The Journalism curriculum is based on the conviction that the proper college preparation for journalism is a broad course with a preponderance of English, history, economics and political science. The Lower Division work provides an excellent foundation for such a course, the

requirements bringing the student into contact with a wide variety of subjects, and with the electives enabling him to begin to develop his studies in English, history, economics and political science, which are fundamental to journalism.

The special journalism subjects, with the slight exceptions noted, are offered only to upper division students, and the greater part of the time of such students will be devoted to non-technical subjects, students of journalism being required to specialize particularly in the work of one of the departments of English, history, economics, or political science. To this end, they will make one of these their major department, will be subject to the direction of the major department in conjunction with the instructors in the Division of Journalism, and will meet the usual requirements of the particular department excepting where otherwise stated. They will be classified and their diplomas marked, if so desired, "English (Economics, History, Political Science) preparatory to Journalism."

Intending journalists are encouraged to engage in college journalism and thus to obtain practical experience during their course. When done systematically and under the supervision of the Division of Journalism, such work will be given credit towards graduation.

First and second year students who are members of the staff of the Daily Palo Alto or reporters on other newspapers will be admitted to the class in Practical Reporting for one unit of credit per quarter, provided they attend the special lectures given in connection with that course which deal with principles and practice in newspaper work. First and second year students may also be admitted to the course in Editorial Management, provided they meet the requirements.

In some of the journalism courses the written work must be done on the typewriter. On this account, and because ability to use the typewriter is necessary for practically all newspaper work, prospective journalism students are advised to gain this ability as early as possible.

To students making English their major subject in preparation for journalism the department offers a variety of courses in advanced and specialized composition and in English language and literature. Such students will meet the following requirements:

(1) A minimum of 30 units of Journalism, including News Writing, 10 units; Copy Reading, 5 units; Editorial Writing or Feature Article Writing, 5 units; American Journalism, 3 units.

(2) A minimum of 30 units of English department courses. At least 25 of these 30 units shall be selected from the following groups of courses, with a minimum of 10 units from group 2, and a minimum of 6 from group 3:

Group I. 9, American Literature (8 units); 22–23, Victorian Literature (6 units); 24, Bible (3 units); 25, Shakespeare (4 units); 29, Outline History (5 units). Total, 26 units.

Group II. 56, English Language (4 units); 58, Chaucer (3 units); 59, Shakespeare (3 units); 60, Spencer (3 units); 61, Milton (3 units); 62, Wordsworth (3 units); 65, Comparative Literature (3 units); 68, English Fiction (5 units); 74, Essay (5 units); Medieval Literature (4 units); 82–84, Literature, 1557–1832 (12 units). Total, 46 units.

Group III. 54, Short Story (5 units); 69, Modern Novel (6 units); 71, Modern Drama (5 units); 75, Essayists (3 units); 86, Criticism (3 units). Total, 22 units.

(3) A knowledge of a modern foreign language sufficient to ensure the rapid translation of current literature in that language.

(4) In history, a minimum of 20 units, including, besides Lower Division requirements in American history, either England since 1485 or Europe since 1815.

(5) In economics and political science, a minimum of 20 units, with Political Science 2, State and Local Government, strongly recommended.

(6) In addition, such courses as those in advertising, logic, argumentation, general psychology, and advanced composition, according to the particular interests and needs of the individual students.

Courses in Journalism

17a. News Writing.—Study of the structure of the news story and of news value, with practice in writing. Sources of news and methods of news gathering. Newspaper organization and news-gathering organizations. All writing in the course must be done on a typewriter.

5 units, autumn and winter quarters (Smith) MTWThF 8
autumn, 36; winter, 22

17b. Copy Reading.—A continuation of course 17*a*. Writing of more difficult news stories. Copy reading, headline writing and proof-reading, with some attention to the mechanical operations of newspaper production.

5 units, spring quarter (Smith) MTWThF 8

40. Editorial Writing.—Study of the function of the editorial, with practice in writing.

5 units, winter quarter (Smith) MTWThF 11
spring, 12

41. The Feature Article.—Study of the feature article for newspaper and magazines, with practice in writing.

5 units, spring quarter (Smith) MTWThF 11
spring, 9

43. American Journalism.—A survey of the development of American newspapers, and a study of the work and influence of outstanding journalists.

3 units, autumn quarter (Smith) MWF 11
spring, 15

44. Practical Reporting.—Practical work in news gathering and writing for The Daily Palo Alto and other newspapers, with conferences. Primarily for journalism major students and those who intend to become such; others may be admitted by special permission.

1 or 2 units, autumn, winter, and spring quarters (Smith, Clyde)
autumn, 17; winter, 11; spring, 5 By arrangement

45. Editorial Management.—Practical advanced work on the editorial staffs of campus publications, with conferences.

2 or 3 units, autumn, winter, and spring quarters (Smith, Clyde)
autumn, 7; winter, 10; spring, 14 By arrangement

46a. Advertising.—Principles and practice of advertising. A study of its history and development into the social and economic force that it is today. The aim of the course is to give to students who are training for journalism, and to others who expect to go into business, a clear idea of what advertising is and how it works, together with some fundamental principles of its use. Intended primarily for fourth-year students.

5 units, autumn quarter (Clyde, Cuddy) MTWThF 10
winter, 85; spring, 55

46b. Advertising.—A more detailed study of current advertising plans and practice. The course is planned to give to students who have had course 46*a* the benefit of a more critical study of current advertising practice and experience in both local and national advertising fields. Some study will be given to the mechanics of advertising and the writing of advertising copy. Open only to students who have had course 46*a*.

3 units, winter quarter (Clyde, Cuddy) MWF 10

GEOLOGY

James Perrin Smith (Paleontology), Austin Flint Rogers (Mineralogy), Cyrus Fisher Tolman, Jr. (Economic Geology), Bailey Willis (Geology), Professors.
Joseph Alexander Taff, Lecturer.
Solon Shedd, Acting Associate Professor.

The Department of Geology offers training in preparation for the profession of geologist or geologic engineer. It also offers the pre-

mining courses necessary for entrance into the graduate Department of Mining and Metallurgy. Choice of these courses is directed by coöperation of the two allied departments. The curriculum is so arranged that in the junior and senior years the students divide naturally into two groups; one going into advanced studies in various branches of geology, the other going more into engineering studies in preparation for the professional work of mining.

Students intending to pursue their major subject in the Department of Geology should offer as a part of their entrance preparation trigonometry, advanced algebra, physics, and chemistry; otherwise the mathematics, physics, and chemistry must be taken in the University.

Courses of study in the Department of Geology lead to the degree of Bachelor of Arts on completing four years of study, or the equivalent of one hundred and eighty units of credit. The degree of Master of Arts may be secured at the close of the fifth year's work, including a thesis, in accordance with the regulations of the University. The degree of Doctor of Philosophy is given on completion of the required additional work under the conditions stated in the REGISTER. The requirement that the work shall be done in residence may in part be waived on recommendation of the department when the needs of original investigation cannot be met at the University.

COURSES OF STUDY

The following is a list of the studies offered in the department. They are grouped under the heads of Geology, Mineralogy, Economic Geology, and Paleontology. Certain elementary courses in the department are required of all students, as indicated: Geology 1; Economic Geology 1, 2; Mineralogy 1; Paleontology 2, 3. In addition to these, Civil Engineering 19, 20, 21 (Surveying), and two years of either French or German are required of all students. (A year of Spanish may be substituted for the second year of either language.) Other courses are elective, except that no study may be taken without proper preparation, and should be selected only after conference with the instructors. At least sixty units of work in the department will be required for the degree of Bachelor of Arts. A part of these may be taken, upon consultation, in the Department of Mining and Metallurgy.

GEOLOGY

Geography 1: Physical Geography.—A lecture course on the aspects of the earth, treating of the facts, causes, and laws of physical geography; intended to give the student a knowledge of the physical world as the abode of man. Open to students from all departments.

1a. First Half of Geography 1.—Three units, lectures only with assigned readings, or five units, lectures and problems. The three-unit lecture course presents the general features of the earth, an outline of meteorology and climate, and an analysis of the physiographic divisions of the United States. The five-unit course includes the above together with special studies adapted to the needs of groups of students in Engineering or other branches.

3 (or 5) units, autumn, *winter, and *summer quarters (autumn, TAFF; winter, WILLIS; summer, SHEDD) Lec MWF 8; Lec.-Probs. MTWThF 8
autumn, 60; winter, 56; summer, 76

1b. Second Half of Geography 1.—Three units, lectures only with assigned readings, or five units, lectures and problems. Course 1*b* is a continuation of course 1*a*, but credit will be given for each half separately. Course 1*a* or its equivalent is a prerequisite to course 1*b*.

3 (or 5) units, spring quarter (WILLIS) Lec. MWF 8; Lec.-Prob. MTWThF 8
spring, 41

Geography 2: Economic Resources of the Northwest.—Lectures and reports on the resources of Oregon, Washington, and British Columbia.

2 units, summer quarter (SHEDD) TTh 10
summer, 10

Geology 1 and 2: Dynamical Geology.—This is designed to be a technical course in dynamical geology in preparation for geologic, mining, and engineering work. It is open to students in science or engineering of sophomore or higher classes. (In the summer and autumn quarters Geology 1 is given for the general public, and primarily for teachers, without requirement of the prerequisites named.) Prerequisites: Chemistry 1, Physics 3*a*, and Engineering 1, 2, and 3.

1. Dynamical Geology.—Deals with earth processes, the evolution of topographic forms, and stratigraphy. Lectures and problems in field and laboratory.

3 or 5 units, autumn, *winter, and *summer quarters (autumn, TAFF; winter, WILLIS; summer, SHEDD) MTWThF 9
autumn, 72; winter, 96; summer, 82

2. Advanced Dynamical Geology.—Deals with strata as geologic formations, structure of sedimentary, igneous, and metamorphic rocks, and closes with an outline of current geologic dynamic theory. Lectures and problems in field and laboratory. Prerequisite: Geology 1.

5 units, spring quarter (WILLIS) MTWThF 9
spring, 40

3. Structural Geology.—Advanced work in the structure of stratified, massive, and foliated rocks. Open only to students who have had Geology 1 and 2, and Mineralogy 1.

2 units, winter quarter (WILLIS) TTh 9

4. Field Geology.—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1, Mineralogy 1, Paleontology 2, 3, and Civil Engineering 20 and 21.

8 units, summer quarter (TOLMAN)
summer, 65

5. Topographic Geology.—The construction of a topographic and geologic map and geologic sections by surveying methods, especially by means of the plane table. Open to students who have completed course 4 in Geology.

7 units, summer quarter (TOLMAN)
summer, 66

6. Regional Geology.—Lectures and reading, with discussions in seminar, on the geologic provinces of North America and other continents.

(WILLIS) By arrangement
winter, 14

7. Advanced Geology.—Reading and research work for advanced students in Geology.

(WILLIS) By arrangement
spring, 4

MINERALOGY

Mineralogy 1: Common Minerals and Rocks.—The study of the more common minerals and prominent rock types. An elementary course with emphasis upon sight determination and simple physical and chemical tests. Introductory to the other courses in mineralogy and petrography. Open to students who have had Chemistry 1, *a*, *b*, and 3. Required of all Geology students, and open to a limited number of other students in order of application.

4 units, autumn and spring quarters (ROGERS)
autumn, 38; spring, 40 Lec. M 11, Th 10; Lab. MW 1:05–4:05

2. Crystallography.—An elementary study of the geometrical and optical properties of crystals with emphasis upon the polarizing microscope as an instrument of research. This course is intended primarily as a prerequisite for course 3, but may also be taken independently by chemistry and physics students as an introduction to the study of the solid state. Prerequisites: Physics 5 and Engineering 3.

4 units, winter quarter (ROGERS) Lec. WF 11; Lab. WF 1:05–4:05
winter, 44

3. Systematic Mineralogy.—Systematic study of the important minerals and their determination by all available methods. Mineralogy 1 and 2 (Crystallography) and Chemistry *d* (Qualitative Analysis) are prerequisites.

4 units, spring quarter (ROGERS) Lec. TTh 10; Lab. TTh 1:05–4:05
spring, 45

4. Petrography.—Study of hand specimens and thin sections of the principal rock types and mineral deposits. In course 3 the properties or characters of minerals are considered, while course 4 is primarily concerned with the relations between associated minerals with special reference to their occurrence and origin. Mineralogy 1, 2, and 3 are prerequisites.

5 units, autumn quarter (ROGERS)
Lec. WF 11; Lab. WF and one period by arrangement, 1:05–4:05
autumn, 20

5. Advanced Mineralogy.—Advanced work in crystallography, mineralogy, or petrography may be undertaken by properly prepared students.

2 to 5 units, winter quarter (ROGERS) By appointment
winter, 3; spring, 1

ECONOMIC GEOLOGY

1. Non-metals.—The occurrence, distribution, origin, and geologic methods of investigation of the non-metallic substances. Prerequisites: Mineralogy 1, Geology 1, and Paleontology 2, 3.

4 units, winter quarter (TOLMAN) MTWTh 8
winter, 57

2. Ores.—The ore-forming processes, modes of occurrence of the various types of ore bodies, and the structures of the ores. A review of the important ore deposits of the United States and of the world. Open to students who have completed Mineralogy 1, Geology 1, and Paleontology 2, 3.

4 units, spring quarter (TOLMAN) MTWTh 8
spring, 57

3. Geology of Oil and Coal.—Prerequisite: Economic Geology 1.

4 units, spring quarter (TOLMAN) MTWTh 9

[4a, 4b. Petroleum Technology.—(Same as Mining and Metallurgy 24, *a* and *b*.)

3 units, winter and spring quarters (ELLIOTT)]

5. Seminar in the Origin and Accumulation of Oil.—(Same as Mining and Metallurgy 47.) A critical study of the literature with reference to the origin and accumulation of oil. Prerequisites: Economic Geology 1, Mining 24-28 inclusive. Students admitted only after personal consultation with the instructor.

4 units, spring quarter (TOLMAN) TTh 9–11
spring 15

6. Seminar in Ore Deposits.—A review of the literature, of ore deposits and the bearing of the data collected upon the problems of ore formation. Prerequisite: Mineralogy 4. For seniors and graduate students. (Three lecture and conference periods and one to three laboratory periods.)

4 to 6 units, winter quarter (TOLMAN) TTh 9–11
winter, 8

7. Special Courses.—These include: (*a*) a study of the literature of some special phase of economic geology, with a thesis; (*b*) field investigations of some mine or mineral district, or the general economic geology of an assigned area; (*c*) microscopic studies of ores collected during field studies, or microscopic investigation of suites of specimens owned by the University. (For graduate students; in exceptional cases seniors will be admitted.)

winter, spring, and summer quarters (TOLMAN) By arrangement
winter, 1; spring, 5; summer, 1

PALEONTOLOGY

Paleontology 1: Systematic Paleontology.—History and character of fossils. Three lectures and six hours of laboratory work weekly.

4 units, autumn quarter (SMITH) MWF 10
autumn, 69

2. Historical Geology.—History and character of geologic formations. Three lectures and six hours of laboratory work weekly.

4 units, winter quarter (SMITH) MWF 10
winter (2 sections), 23, 54

3. Historical Geology.—Continuation of course 2.

4 units, spring quarter (SMITH) MWF 10
spring, 68

4. Systematic Conchology.—Special studies in Tertiary and Recent Conchology of the West Coast. One lecture and two afternoons of laboratory work weekly.

2 units, autumn quarter (SMITH) TTh 1:05–4:05

5. Tertiary Conchology of California.

2 units, winter quarter (SMITH) ThF 1:05–4:05
winter, 8

6. Paleobotany of California.

2 units, spring quarter (SMITH) ThF 1:05–4:05
spring, 2

7. General Geology of California.

2 units, autumn quarter (SMITH) TTh 10
autumn, 48

8. Detailed Stratigraphy of California.

2 units, winter quarter (SMITH) TTh 10
winter, 13

9. Stratigraphic History of the Great Basin.

2 units, spring quarter (SMITH) TTh 10
spring, 18

10. Advanced Paleontology.—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work in field and laboratory. Open to advanced students and graduates.

2 to 5 units, all quarters (SMITH) By arrangement
autumn, 12; winter, 7; spring, 8

GERMANIC LANGUAGES

WILLIAM ALPHA COOPER, ‡GEORGE HEMPL, KARL GUSTAV RENDTORFF, Professors.
BRUNO BOEZINGER, Associate Professor.
CATHARINE MORRIS COX, Instructor.
SOPHIA JULIANE WOLTERS, Assistant in Instruction.

The elementary and intermediate courses listed below are designed to prepare students to read German without translation, and to express ideas in simple German prose. Those who have completed third-year German may take any course in Group II for which, in the judgment of the instructor in charge, they are prepared. All courses in Group II, except 76, 91, 92, 106, 131, 132, and 133, presuppose considerable facility in reading German and the ability to follow lectures in German.

Candidates for the A. B. degree in German are expected to elect courses from Group II totaling fifteen units.

Candidates for the Teacher's Recommendation in German are expected to elect thirty units from Group II, including Middle High German.

Candidates for the Teacher's Recommendation in German as a minor subject are referred for information to the Bulletin of the School of Education. Proficiency in German will be insisted upon.

Candidates for the A. M. degree in German are expected to take courses 52 and 151, and thirty units besides from Group II.

Candidates for the Ph.D. degree are referred to the bulletin on Graduate Study.

The library facilities are good, and the collections are being strengthened in all directions. The private library of the late Professor Hildebrand, of the University of Leipzig, furnishes valuable material, particularly in the older literature and in lexicography. In modern literature the Library offers good opportunities for advanced work, the Goethe collection being especially satisfactory. The files and the current numbers of the most important journals are at hand.

The department maintains, in room 112, a special library of its own, a collection of German textbooks and a model reference library for a secondary-school teacher. This collection of books is supplemented by an extensive collection of maps, wall pictures, and lantern slides, suited for use in teaching.

I. ELEMENTARY AND INTERMEDIATE COURSES

1. First-year German.—It is the object of this course to put the

‡ Deceased August 14, 1921.

learner in possession of the elements of the German language. This implies: (1) a personal command of simple German, that is, ability to understand such German, whether heard or read, and to employ the language in simple conversation, narration, and description, both orally and in writing; (2) such a ready familiarity with the elements of German grammar as is essential for the attainment of this command of the language.

5 units, autumn quarter (WOLTERS) MTWThF 8, 9, 11
autumn (3 sections), 90

2. First-year German, continued.

5 units, winter quarter (COX, WOLTERS) MTWThF 8, 9, 11
winter (3 sections), 73

3. First-year German, continued.

5 units, spring quarter (COX, WOLTERS) MTWThF 8, 9, 11
spring (3 sections), 62

[NOTE.—Courses 1, 2, and 3, together, are equivalent to two years of German in the high school, and may be taken by students who have presented no units of credit in German for entrance into the University. Those who present one unit for entrance may take courses 2 and 3.]

20. Free Reading.—Open to students who have had a year or more of German. Permission of the instructor necessary before registration. 36 hours of reading per unit, and weekly conferences with the instructor.

1 or 2 units, each quarter (BOEZINGER, COOPER, COX) By arrangement
autumn, 11; winter, 17; spring, 10; summer, 7

21. Second-year German.—The aim of this course is to extend and strengthen the student's personal command of German, both oral and written. The course is taken to best advantage as a whole, but may be taken in part, either the division *21a*, which is devoted to the reading and discussion in German of texts selected from the writings of contemporary or late nineteenth century authors, or the division *21b*, which affords training in composition, conversation, and practical grammar.

21a. Second-year Reading.

3 units, autumn quarter (BOEZINGER, COOPER) MWF 9, 11
autumn (2 sections), 23, 13

21b. Second-year Composition.

2 units, autumn quarter (BOEZINGER, COOPER) TTh 9
autumn, 14

22. Second-year German, continued.

22a. Second-year Reading.

3 units, winter quarter (BOEZINGER, COX) MWF 9, 11
winter (2 sections), 17, 18

22b. Second-year Composition.

2 units, winter quarter (BOEZINGER) TTh 9
winter, 10

23. Second-year German, continued.

23a. Second-year Reading.
3 units, spring quarter (BOEZINGER, COX) MWF 9, 11
spring (2 sections), 10, 9

23b. Second-year Composition.
2 units, spring quarter (BOEZINGER) TTh 9
spring, 7

[NOTE.—Second-year German (which includes courses 21, 22, and 23) is the equivalent of the third and fourth years of German in the high school. Students who present three units in German for entrance may take courses 22 and 23, or 23 and 24.]

24. Second-year German.

24a. Second-year Reading.
3 units, summer quarter (COX) MWF 8
summer, 5

24b. Second-year Composition.
2 units, summer quarter (COX) TTh 8
summer, 4

25. Scientific German.
3 units, autumn quarter (BOEZINGER, COX) MWF 9
autumn, 37

26. Scientific German, continued.
3 units, winter quarter (BOEZINGER) MWF 9
winter, 32

27. Scientific German, continued.
3 units, spring quarter (BOEZINGER) MWF 9
spring, 18

[NOTE.—Courses 25, 26, and 27 form one continuous course, but credit may be obtained for the work of any quarter separately. Prerequisites: Courses 1, 2, and 3, or two entrance units in German. Not open to freshman students.]

28. Scientific German.
3 units, summer quarter (COX) MWF 9
summer, 8

29. Directed Reading in Scientific German.—36 hours of reading per unit, and weekly reports to the instructor.
1 to 3 units, each quarter (BOEZINGER, COX) By arrangement
autumn, 16; winter, 11; spring, 29; summer, 12

31. Third-year Reading.—The chief aim of this course is to develop the ability to read printed German and understand spoken German both rapidly and accurately.
3 units, autumn quarter (COOPER) MWF 11
autumn, 5

32. Third-year Reading, continued.
3 units, winter quarter (COOPER) MWF 11
winter, 7

33. Third-year Reading, continued.
3 units, spring quarter (COOPER) MWF 11
spring, 5

34. Third-year Reading.
3 units, summer quarter (Cox) MWF 11
summer, 1

41. Third-year Composition.—By composition is meant, not translation from English, but the employment in connected prose of German material either gathered from reading or specially assigned by the instructor.
2 units, each quatrer (RENDTORFF) By arrangement
summer, 1

II. Advanced and Graduate Courses

50. Directed Reading.—Prerequisite: Third-year Reading for three quarters, or an equivalent. Individual courses of reading, suited to special needs and desires. Thirty-six hours of reading per unit, and brief interviews, once a week, with the instructor.
1 or 2 units, each quarter (COOPER, COX, RENDTORFF) By arrangement
autumn, 16; winter, 19; spring, 19; summer, 9

51. Advanced Composition.—The aim of this course is to develop correct, idiomatic and adequate expression.
1 unit, each quarter (BOEZINGER) By arrangement
autumn, 4; winter, 3; spring, 1

52. Undergraduate Thesis.—Individual training in the aims and methods of research.
1 or 2 units, each quarter (COOPER, RENDTORFF) By arrangement
spring, 1

53. German Etymology.
2 units, winter quarter (COOPER) TTh 11

54. German Syntax.
2 units, winter and spring quarters (COOPER) TTh 11
winter, 6; spring, 7

62. Individual Composition.
1 unit, each quarter (RENDTORFF)
spring, 1; summer, 1

71. Lessing and His Time.
3 units

72. Herder and the Storm and Stress.
3 units

73. Goethe, His Life and Works.
3 units (COOPER)

74. Goethe's Lyrics and Ballads.
3 units, autumn quarter (COOPER)
autumn, 6

75. Goethe's Faust.—Course conducted in German.
4 units (COOPER)

76. Goethe's Faust in English Translation.—An all-English course.
3 units, winter quarter (COOPER) MWF 8
winter, 12

77. Schiller's Works.
3 units, spring quarter (RENDTORFF) TTh 10
spring, 2

78. Heine and the Young German Movement.
3 units, summer quarter, 1921; autumn quarter, 1921 (RENDTORFF) TTh 10
summer, 3

81. History of German Literature up to the Nineteenth Century.
3 units (RENDTORFF)

82. History of the Nineteenth Century Literature.
3 units, winter quarter (RENDTORFF) MWF 10
winter, 3

85. Current Literary Movements.
3 units, summer quarter, 1921; spring quarter, 1922 (RENDTORFF) MWF 10
summer, 2

86. The Development of the Drama.
3 units, summer quarter (RENDTORFF) MWF 10

87. The Development of the Novel.
3 units (COOPER) TTh 11

[History of Germany.—See History 57.]
3 units, winter quarter (RENDTORFF) MWF 8
(winter, 17)

92. History of German Civilization.—Lectures, with stereopticon.
2 units, spring quarter (RENDTORFF) MW 2:05-4:05
spring, 10

101. Conversation.
1 unit, each quarter (BOEZINGER, COX) By arrangement
autumn, 2; winter, 3; spring, 1; summer, 2

106. Modern Language Teaching.—Lectures on the various methods of teaching modern foreign languages, and the psychology involved.
1 unit, autumn quarter (HEMPL) W 1:05
autumn, 11

107. German Teachers' Course.—Instruction and practice in progressive methods; examination of textbooks and illustrative material.
2 units, spring quarter (COOPER) By arrangement

121. Gothic.
2 units (BOEZINGER) By arrangement

122. Old Norse.
2 units By arrangement

123. Old High German.
2 units (BOEZINGER, RENDTORFF) By arrangement

124. Middle High German.—Grammar and selected texts.
2 units, winter and spring quarters (RENDTORFF) By arrangement
winter, 4; spring, 2

131. Phonetics.—Lectures and drill in general phonetics, for students of ancient or modern languages, including English.
3 units, spring quarter (HEMPL) MWF 1:05
spring, 5

132. The Genesis of Grammar.
2 units, autumn quarter (HEMPL) TTh 1:05
autumn, 4

133. The Genesis of Writing.
2 units (HEMPL)

134. The Runes.—Lectures on the origin and development of primitive Germanic writing.
2 units (HEMPL)

136. Comparative Grammar of German and English.
3 units, spring quarter (HEMPL)

141. Seminary.
3 units By arrangement

151. Master's Thesis.—The candidate reports weekly to the instructor in charge for criticism, the work extending over three quarters, as a rule.
1 to 3 units, any quarter (COOPER, RENDTORFF) By arrangement
autumn, 1; winter, 1; summer, 1

GREEK

AUGUSTUS TABER MURRAY, Professor.
ERNEST WHITNEY MARTIN, Associate Professor.

[With the coöperation of Professor FAIRCLOUGH, of the Department of Latin.]
The department accepts as major students those who wish to make their work in college conform to the traditional Arts course, in which Classical studies form an important element, and also makes provision for the thorough training of those who look forward to post-graduate work in the Classics either in this University or elsewhere.

Students who have had no Greek before entering the University may begin their study of the language in any quarter in introductory classes which are open to students in all departments of the University. Students who offer Greek on entrance will be registered in classes adapted to their needs.

The major requirements for graduation amount normally to forty-five credit units. These for the most part naturally represent work in the study of the Greek language, especially in the case of students looking forward to post-graduate work in the Classics, but after the completion of courses 1–6 students desiring to do so may substitute for further work in the language the more general courses offered in the department, and with the consent of the departmental adviser a part of this elective work, when the tastes or special aims of the individual student justify it, may be taken in allied departments.

Together with the classes in Greek language the department offers courses in Greek Literature, Greek Art, Greek History, and New Testament Literature, which, as above indicated, may be taken as a part of the required work of major students in Greek, but which presuppose no knowledge of the Greek language, and are open to students in all departments of the University.

Students applying for the High School Teacher's recommendation in Greek must have completed the following courses: for a major, 1–6 inclusive, nine units selected from courses 7–12, and 17 and 18; for a minor, 1–4, 6 (or an equivalent), 17, and 18.

In courses 1–3 the work is arranged so as to provide as far as possible individual instruction adapted to the needs of each student. In courses 4–6 the intensive study of a limited portion of the authors read is supplemented by sight translation and by readings and lectures by the instructor.

Undergraduate Courses

1. Introduction to Greek.—Grammar (Bryant and Lake); learning of word-lists; writing of simple sentences; reading of the Gospel of John (White).

3 to 5 units, any quarter (Martin, Murray) MWF 9; MTWThF 1:05
autumn, 2; winter (2 sections), 5, 4; spring, 2; summer, 2

2. Xenophon.—Review of Greek Grammar; learning of word-lists from Xenophon; reading of selections from the Anabasis (Murray); writing of exercises based upon the text read.

4 units, winter and spring quarters (Martin, Murray) MTThF 2:05
winter, 6; spring (2 sections), 2, 2

3. Attic Prose Writers.—Systematic review of Greek syntax (Goodwin); learning of word-lists from the texts read; reading of portions of Cebes' Tablet (Parsons); Plato's Apology (Dyer-Seymour).

4 units, autumn and winter quarters (Martin) MTWF 8
autumn, 2; winter, 2

4. Introduction to Homer.—Study of Homeric forms and meter (Sey-

mour); learning of Homeric word-lists (Owen and Goodspeed); reading of selections from the Iliad (Monro).

4 units, spring quarter (MARTIN) MWThF 9
spring, 3

5. The Greek Historians.—Selections from Herodotus (Smith); Thucydides, Book I (Morris); study of The Greek Historians (Bury).

4 units, winter quarter

6. Introduction to Greek Poetry.—Reading of Euripides' Alcestis (Earle); the Greek Lyric Poets (Tyler); the Greek Anthology (Stadtmüller); Short History of Greek Literature (Wright).

4 units, autumn quarter (MARTIN)

7. Euripides.—Reading of Medea (Moore); Hippolytus (Harry); lectures and a study of these dramatic themes as treated by later poets.

3 units, autumn quarter (MARTIN)
spring, 1

8. Sophocles.—Reading of Antigone (D'Ooge); Electra (Mather); lectures on the art of Sophocles.

3 units, summer quarter (MURRAY) MWF 11
summer, 1

9. Aeschylus.—Reading of Prometheus Bound (Allen-Wecklein); Agamemnon (Sidgwick); lectures.

3 units, spring quarter (MURRAY) MWF 11

10. Plato.—Reading of the Republic, Books I and II (Wells); lectures.

3 units, spring quarter (MURRAY) MWF 2:05
spring, 2; summer, 4

11. Demosthenes.—Reading of the De Corona (Tyler); sight translation of Aeschines Against Ctesiphon (Richardson).

3 units, winter quarter (MURRAY) [Not given in 1921–22]
winter, 2

12. Pindar and Theocritus.—Reading of selected Odes of Pindar (Gildersleeve); reading of Theocritus (Cholmeley); lectures on Pastoral Poetry in ancient and modern literatures.

3 units, spring quarter (FAIRCLOUGH) By arrangement

SUPPLEMENTARY COURSES

13. Individual Work.—Students and instructors meet each week for work suited to the needs of the individual.

1 to 4 units, each quarter (MURRAY, MARTIN) By arrangement
autumn, 2; winter, 4; spring, 5; summer, 3

14. Journal Club.—Instructors and advanced students meet each week for the discussion of journals and new books of interest to Classical students.

2 units, winter and spring quarters (MURRAY, MARTIN)

15. Thesis Course.—Advanced students may under the guidance of the instructor undertake special studies for presentation in thesis form. This course is intended primarily to afford training in the methods of investigation.

2 units, each quarter (MURRAY, MARTIN) By arrangement
autumn, 1

16. Modern Greek.—Grammar (Rangabe); reading of easy texts.

2 units, spring quarter (MURRAY)
spring, 2

17. Teachers' Course.—Lectures on methods, with practical training.

2 units, spring quarter (MURRAY) S 9

GENERAL COURSES

18. The Greek Epic.—Lectures on Homeric Poetry, with reading of the Iliad and Odyssey in English (Iliad, Lang, Leaf, and Myers; Odyssey, Butcher and Lang).

3 units, winter quarter (MURRAY) MWF 9
winter, 25

19. Greek Tragedy.—Lectures on the art of tragedy among the Greeks, with the study of selected plays in translation (Aeschylus, Morshead; Sophocles, Jebb, Euripides, Everyman's Library).

3 units, spring quarter (MURRAY) MWF 9
spring, 81

20. New Testament Literature.—Lectures on the origin, authorship, and characteristics of the books of the New Testament. Peake's Critical Introduction is used as a handbook.

3 units, autumn quarter (MURRAY) MWF 9

21. Greek Literature, Poets.—Lectures, reading in translations of selections from the greater Greek poets with some reference to their influence on later literature. Textbook, Homer to Theocritus (Capps).

3 units, autumn quarter (MARTIN) MWF 11
spring, 77

22. Greek Literature, Poets.—Continued.

3 units, winter quarter (MARTIN) MWF 11
autumn, 53

23. Greek Literature, Prose Writers.—Lectures; reading in translations of selections from Herodotus, Thucydides, Xenophon, Plato, Demosthenes, Plutarch, and Lucian. Textbook, Short History of Greek Literature (Wright).

3 units, spring quarter (MARTIN) MWF 11

24. Greek History A.—From the earliest times to the end of the Persian wars. Lectures, with a study of Herodotus in English translation.

3 units, autumn quarter (MARTIN) [Not given in 1921–22]

25. Greek History B.—The Fifth Century. From the end of the Persian wars to the fall of the Athenian empire. Lectures, with a study of Plutarch and Thucydides in English translations.

3 units, winter quarter (MARTIN) [Not given in 1921–22]
winter, 70

26. Greek History C.—The Fourth Century. From the fall of Athens to the death of Alexander. Lectures, with a study of Xenophon, Plutarch, Demosthenes, and Arrian in English translations.

3 units, spring quarter (MARTIN) [Not given in 1921–22]

27. Greek Sculpture.—Lectures, illustrated with photographs and lantern slides, on the history and character of Greek sculpture.

2 units, autumn quarter (FAIRCLOUGH) TTh 11

28. Greek Myths.—The more important myths and legendary characters of early Greece are traced through Greek literature with some reference to their treatment in later literature. Lectures with assigned reading. Open only to students who have had Greek.

3 units, spring quarter (MARTIN) [Not given in 1921–22]

28a. Greek Masterpieces.

3 units, summer quarter (MURRAY) MWF 9
summer, 80

Thesis.

summer quarter (MURRAY)
summer, 1

GRADUATE COURSES

29. The Greek Seminary.—Graduate students and such others as may satisfy the director of their fitness for the work will meet each week during the year 1921–22 for the critical study of the *Republic* of Plato.

2 to 4 units, autumn, winter, and spring quarters (MURRAY) By arrangement
autumn, 2; winter, 2; spring, 2

Graduate students will also find it well to take courses 14, 15, and 17.

HISTORY

EPHRAIM DOUGLASS ADAMS, ‡ARLEY BARTHLOW SHOW, PAYSON JACKSON TREAT, Professors.

RALPH HASWELL LUTZ, PERCY ALVIN MARTIN, EDGAR EUGENE ROBINSON, Associate Professors.

†YAMATO ICHIHASHI, REGINALD GEORGE TROTTER, Assistant Professors.

EVERETT SOMERVILLE BROWN, HENRY BARRETT LEARNED, Lecturers.

† Absent on leave, 1920–21.
‡ Deceased October 28, 1920.

The Department of History provides a liberal course for the A. B. degree, offers opportunity for graduate study leading to higher degrees, in certain selected fields in which the University is especially well equipped, trains teachers of History, and renders a general service to the other departments of the University.

In addition to its more specialized work, the Department offers a number of courses grouped as (I) Introductory and (II) Advanced Lecture Courses intended to meet the general needs of the University constituency. The underlying principle of these courses is that they shall be useful, not in the utilitarian sense, but in the sense that they aid in equipping the student for his duties as a citizen and in giving him instruction that may be helpful in such work as Law, Journalism, Library Research, State and National Public Service, and in business where a knowledge of domestic and foreign affairs is desirable.

For History majors the curriculum for the degree of A. B. is designed to familiarize the student with the fundamentals and methods of the chief branches of knowledge, and with the methods of historical science. With this object in view, a general system of advice and requirement has been outlined, but it may be varied to suit the circumstances of the truly exceptional student. Under the four-quarter system 180 units are required for graduation. The general system of the History Department prescribes 45 units of History, of which 3 are required in an Introductory Seminar, and 6 in one or two Seminar Courses. In addition to the requirements of the Lower Division the Department requires eight units in Economics or Political Science, and a reading knowledge of at least one foreign language by the end of the Junior year.

Advanced Degrees.—Graduate students, candidates for advanced degrees, are desired and will be given personal guidance, but the purposeless graduate student will not be accepted by the Department. For the opportunities of graduate study in History see University Bulletin on Graduate Study.

Graduate students seeking to fulfill the requirements of the State Board of Education for the Teacher's Certificate will be given the necessary aid and opportunities, but will register as majors in the School of Education. (See University Bulletin of School of Education.)

The Teacher's Recommendation in History.—Applicants for the departmental recommendation, as a major, must have completed in a manner acceptable to the Department at least 42 units of History, as follows: (1) Seminar Courses aggregating at least 6 units; (2) Introductory Seminar Course, 3 units; (3) the Teachers' Course in History

(History 100), 3 units; (4) 30 units in the group of courses selected from the following fields: Medieval and Modern History (courses 10-14 inclusive); English History (courses 16 and 17); Far Eastern History (courses 27-32 inclusive); American History (courses 21-24 inclusive); Latin-American History (courses 36 and 37). History majors may substitute for any two of the Introductory Courses 10 units of Ancient History as offered by the Departments of Greek and Latin.

As prerequisite to the departmental recommendation in History for the high school teacher's certificate as a minor, the student must have completed at least 27 units in either European or American History, as follows:

1. For the minor in European History: (*a*) 15 units in the group of Introductory Courses selected from the fields of European History, English History, and Far Eastern History; (*b*) 3 units in an Introductory Seminar Course; (*c*) 6 units in a Seminar Course; (*d*) the Teachers' Course in History, 3 units.

2. For the minor in American History: (*a*) 15 units in the group of Introductory Courses selected from the field of American History and Latin-American History; (*b*) 3 units in an Introductory Seminar Course; (*c*) 6 units in a Seminar Course; (*d*) the Teachers' Course in History, 3 units.

Any student who has secured the minor recommendation of the Department in either European or American History may thereafter earn the major recommendation by completing the 15 units of the Introductory Course in the opposite group.

Students taking History as a major with the intention of preparing for Journalism are referred to the heading Journalism on page 191.

SUMMER QUARTER.—Summer Quarter courses are ordinary divided into halves, either of which may be taken independently.

I. INTRODUCTORY COURSES

[**24. Greek History A.**—From earliest times down to the end of the Peloponnesian War. Open to all students.]

3 units, autumn quarter (MARTIN) [Not given in 1920–21]

[**25. Greek History B.**—From the Spartan Supremacy to the Roman Conquest. Open to all students.]

3 units, winter quarter (MARTIN) [Not given in 1920–21]

[**29. History of Rome.**—A general course, open to all students.]

3 units, spring quarter (ELMORE)

10. European History, 395–1300.—A general course dealing with the development of medieval life and institutions, with special attention to feudal conditions, and also to the church as the controlling force influencing every element of the life of the time. Open to all students.

5 units, autumn quarter (Show) MTWThF 11
autumn, 73

11. European History, 1300–1648.—A continuation of History 10, with special emphasis upon the Renaissance and the Reformation, and covering the broader movements of the later period up to the Peace of Westphalia. Open to all students.

5 units, winter quarter (Learned) MTWThF 11
winter, 66

12. Europe Since 1648.—A survey of the political, economic, and social development of the European nationalities with special emphasis upon the period of absolutism, industrial revolution, French revolution, growth of democracy and nationalism, and the world war. Open to all students.

5 units, spring quarter (Brown); summer quarter (Lutz) MTWThF 11
spring, 104; summer, 153

16. English History to 1603.—A general outline course on the making of the English state and nation to the death of Elizabeth, with emphasis upon events and institutions especially significant for the later history of the English-speaking peoples. Lectures and outside reading. Open to all students, though especially intended for those in the Lower Division.

4 units, autumn quarter (Trotter) MTWF 11
autumn, 104

17. England Since 1603, and British Overseas Expansion.—A continuation of History 16.

4 units, winter quarter (Trotter) MTWF 11
winter, 86

21. American History, 1607–1789.—A survey of the English Colonization of the Atlantic Seaboard and of the westward movement of colonists of the British Empire, followed by a consideration of the Revolution and of the formation of the American government. Open to all students.

3 units, spring quarter (Robinson) MWF 9
spring, 221

22. American History, 1789–1848.—Presidential administrations from Washington to Polk; the War of 1812; industrial changes and expansion; abolition; political changes, territorial expansion. Open to all students.

3 units, autumn quarter (Adams) MWF 9
autumn, 145

23. American History, 1848–1919.—Slavery issues; the Civil War; reconstruction; industrial changes; new political parties and theories; the United States and world politics. Open to all students.

3 units, winter quarter (ADAMS) MWF 9
winter, 125

24. The Westward Movement.—A survey of the expansion of the American people into the Mississippi Valley, and the American occupation of the Pacific Northwest and of California. Open to all except freshman students.

4 units, spring quarter (ROBINSON) [Not given in 1920–21]

25. Constitutional History of the United States.—An elementary lecture course. Open to all students.

5 units, summer quarter (BROWN) MTWThF 10
summer, 54

27. The Far East.—An account of the relations between Western nations and the peoples of Eastern Asia. Emphasis is placed upon international relations, especially since the middle of the 19th century, rather than upon the domestic history of the Eastern nations The work of the Portuguese, Dutch, and British is studied and special attention is given to the rise of the British Empire in India. Open to all except freshman students.

5 units, winter quarter (TREAT) MTWThF 9
winter, 106

28. The Far East.—The relations of the West with China, Indo-China, Japan, and the Philippines. Open to all except freshman students.

5 units, summer quarter (TREAT) MTWThF 9
summer, 102

31. History of Japan to 1600.—A survey of, and an attempt to interpret, the history of the ancient and medieval civilization of Japan. Particular attention is paid to the origin of the Japanese race, early influence of the continental civilization, the Great Reform of 645, the Taiho Code of 701, the position of Buddhism and Buddhists in Nara civilization, Japanese language, Heian or classical culture of Japan, the rise of feudalism, the feudal institutions of Kamakura, the Mongol invasions, Japan's foreign relations, the religions, Shintoism, Buddhism, and Christianity, and Hideyoshi's colossal ambitions. Open to all except freshman students.

4 units, autumn quarter (ICHIHASHI) [Not given in 1920–21]

32. History of Early Modern Japan, 1600–1854.—A detailed examination of feudal Japan under the Tokugawa in order to obtain the underlying factors in Japanese life. Special attention is given to the political and social structure of the country, to Tokugawa laws and

legal institutions, Japan's foreign and domestic commerce and commercial institutions, industrial development and industrial arts, fine arts, education, philosophy, science and literature, and Bushido. Open to all except freshman students.

4 units, winter quarter (Ichihashi) [Not given in 1920–21]

36. History of Spanish America.—An outline course, dealing chiefly with the Spanish Colonial System and the Spanish-American Wars of Independence. Open to all except freshman students.

5 units, autumn quarter (Martin) MTWThF 9
autumn, 149

37. History of South America Since 1823.—A continuation of History 36. An outline course dealing with the history and institutions of the leading nations of South America; includes the discussion of such topics as the Monroe Doctrine, Pan-Americanism, and the relations between the United States and Latin America.

5 units, winter quarter (Martin) MTWThF 9
winter, 99

40. The Issues of the Great War.—Lectures and reading. This course will be given as it was organized to meet the requirements of the S. A. T. C., but with additions to cover the work of the Peace Conference. Open to all.

2 units, spring quarter (Adams) TTh 9
spring, 255

II. Advanced Lecture Courses

[The courses in this group are intended for students of at least junior standing, but sophomores may be admitted at the discretion of the Instructor.]

[History of Roman Civilization.—See Latin 37.]

51. Europe Since 1815.—A course of lectures on the conflict of Reaction and Liberalism, the Industrial Revolution, the emergence of class consciousness, nationalism and imperialism, the Great War and the terms of peace.

3 units, autumn quarter (Lutz) MWF 10
autumn, 32

52. The French Revolution.—A general survey of the period.

3 units, winter quarter (Lutz) MWF 11
winter, 14

56. History of Canada.—A survey of the evolution of the Dominion of Canada. Preliminary consideration of the periods of discovery, of early trade and settlement by French and British, and of the contest between France and Britain for empire, followed by a survey of the further development of the several colonies, their achievement of responsible government, their consolidation and expansion into a conti-

nent-wide federal dominion and growth to autonomous nationhood as a member of the British Empire Commonwealth. Emphasis also upon the significance in Canadian History of Canada's nearness to and relations with the United States.

4 units, spring quarter (TROTTER) MTWF 10
spring, 48

57. History of Germany.—A general survey, with particular emphasis on the period since 1848.

3 units, winter quarter (RENDTORFF) MWF 8
winter, 17

62. History of the West.—A consideration of the political phases of the expansion of the American people; an examination of new issues and new groups that have arisen in the West and their influence upon national party history.

3 units, winter quarter (ROBINSON) MWF 10
winter, 28

64. British-American Diplomatic Relations.—Lectures and reading on those incidents or conditions in foreign policy where the United States has come into conflict or contact with the foreign policy of Great Britain and her colonies; with a survey of the general purpose of British and of American foreign policy throughout the hundred-year period.

3 units, spring quarter (ADAMS) MWF 10
spring, 33

66. History of Australasia.—An account of British colonization in Australia and New Zealand to the present time. Open to third-year students who have a satisfactory knowledge of English history.

3 units, autumn quarter (TREAT) MWF 10
autumn, 37

68. Modern Japan Since 1854.—A critical study of political and economic Japan since 1854 in order to determine the causes that enabled the nation to attain her present position in the world of politics and economics. Special attention is paid to political movements since the reopening of Japan to Western intercourse and to the promulgation of a constitution in 1889, or the struggle between feudalism or bureaucracy and liberalism or democracy.

3 units, spring quarter (ICHIHASHI) [Not given in 1920–21]

70. History of Mexico and California.—A somewhat detailed study of the history of Mexico up to the present time, and of the history of California to 1848.

3 units, spring quarter (MARTIN) MWF 11
spring, 12

[**Law 10. Constitutional Law I.**—Accepted for credit in fulfilling the History requirements for the A. B. degree.

3 units, winter quarter (CATHCART)]

[**Law 11. Constitutional Law II.**—Accepted for credit in fulfilling the History requirements for the A. B. degree.
3 units, spring quarter (CATHCART)]

[**Law 14. International Law.**—A course given by the Law Department, strongly advised for History majors interested in world politics and relations. It will be accepted for credit in fulfilling the History requirements for the A. B. degree. Open, at the discretion of the instructor, to majors of other than the Law Department in their third or fourth year.
4 units, winter quarter (HUSTON)]

III. INTRODUCTORY SEMINAR COURSES

[The courses in this group are intended primarily for History majors in their junior year, as preparation for senior seminars, or graduate work. If a course is not filled by History majors, others may be admitted at the discretion of the instructor.]

76. German Constitutional History.—An intensive study, from documents.
3 units, autumn quarter (SHOW) MWF 9
autumn, 4

80. British Constitutional History.—An explanation of underlying principles, development, and operation of the Constitution.
5 units, winter quarter (TROTTER) MTWThF 10
winter, 68

84. Studies in the French Reign of Terror.
3 units, winter quarter (LEARNED) MWF 10

86. Relations Between California and the Federal Government.—An examination of materials revealing the problems of California and their relation to national development.
3 units, spring quarter (ROBINSON) M 3–5
spring, 11

88. American Diplomatic Relations.—Not a general survey of the field, but a specialized study of selected topics, with use of the available documentary material. Intended primarily for History majors, but open to junior students who are familiar with the elements of American and European History.
3 units, autumn quarter (ADAMS) W 2–4
autumn, 15

90. Tropical Colonization in the Far East.—A study in the present methods of the English, Dutch, French, and American governments in their tropical dependencies in the Far East. Investigation, discussion and reports. Open to students who have taken courses 27 and 28.
3 units (TREAT) [Not given in 1920–21]

92. Governments of the Far East.—A study of the present govern-

mental systems of China and Japan. Open to students who have taken course 28.

3 units, spring quarter (TREAT) [Not given in 1920–21]

96. History of Brazil.—A somewhat detailed study of the History of Brazil, with special emphasis on the period since 1822. The course will include a comparison of Brazilian political institutions with those of Spanish America and the United States. Open to those who have had History 37 and to others with permission of the instructor.

3 units, autumn quarter (MARTIN) MWF 11
autumn, 9

97. Selected Topics in Japanese Political History.—Papers, reports, and discussion in class, with examination of materials in English useful to a correct understanding of Japanese institutions.

3 units, spring quarter (ICHIHASHI) [Not given in 1920–21]

IV. SEMINAR COURSES

[For History majors primarily, of senior or graduate standing.]

100. The Teaching of History.—A course intended for those students who expect to teach history in intermediate or secondary schools. Its purpose is to make the student acquainted with the aims, the methods, the apparatus, and the literature of the work of teaching history.

3 units, spring and summer quarters (BROWN) MWF 2–3
spring, 14; summer, 12

105. Seminar in Medieval History.—Subject: German expansion into Slavic lands.

3 units, autumn and winter quarters (SHOW) [Not given in 1920–21]

107. Seminar in Modern European History.—Subject selected from the period since 1789.

3 units, autumn, winter, and summer quarters (LEARNED, LUTZ) Th 2–4
summer, 9

110. Seminar in the History of England and the British Empire.

3 units, autumn and spring quarters (TROTTER) Th 2–4
autumn, 13; spring, 11

113. Seminar in the History of the West.—A study of materials relating to the political phases of westward expansion.

3 units, winter quarter (ROBINSON) M 2–4
winter, 14

119. Seminar in American Diplomatic History.—Topics selected from the period since 1865.

3 units, winter and spring quarters (ADAMS) W 2–4
winter, 12; spring, 11

122. Seminar in American-European Relations.—Limited to candidates for advanced degrees.

Units various, any quarter except summer (ADAMS) By appointment

125. Seminar in the History of the Far East.—Each year some phase or period of the relations of the United States with the Far East will be studied, and each student will prepare a thesis on some special topic of investigation.

3 units, autumn, winter, and summer quarters (TREAT) T 2–4
autumn, 9; winter, 9; summer, 4

128. Seminar in Japanese History.—Individual investigation under advice and direction of the instructor.

3 units, autumn and winter quarters (ICHIHASHI) [Not given in 1920–21]

131. Seminar in Latin-American History.—Subject for 1920–21: Diplomatic Relations between the United States and Latin America.

3 units, winter and spring quarters (MARTIN) M 2–4
winter, 4; spring, 7

140. Summer Graduate Work.—Students properly qualified under the University regulations, to pursue genuine graduate studies, will be given special attention and due credit allotted for the work accomplished. Such students will receive individual advice and guidance, whether in set courses or in special research. For the summer quarter in 1921 the fields for such graduate work, and the instructors in attendance, were: (1) Far Eastern History, Professor TREAT; (2) Modern European History, Professor LUTZ, (3) American History, Mr. BROWN.

Units, not to exceed total of 15 Hours by arrangement
autumn (2 groups), 6, 1; winter, 4; spring (2 groups), 1, 1; summer, 3

Thesis.

summer quarter (TREAT)
summer, 3

HOPKINS MARINE STATION

WALTER KENRICK FISHER, Director.

LEROY ABRAMS, JAMES PERCY BAUMBERGER, EDITH RONALD MIRRIELEES, JAMES MONTROSE DUNCAN OLMSTEAD, GERTRUDE VAN WAGENEN, FRANK WALTER WEYMOUTH.

The HOPKINS MARINE STATION is situated at Pacific Grove on the south side of Monterey Bay, California. The Station, originally designated the Hopkins Seaside Laboratory (later, the Marine Biological Laboratory), was opened in 1892 and was the joint gift of Mr. Timothy Hopkins and the Pacific Improvement Company. A second building, donated by Mr. Hopkins, was added in 1893.

In 1916 a new location was secured, nearly five acres in extent, consisting of the main portion of Cabrillo Point, about half a mile east of the old site. The situation insures complete control of the coast line

of the point, including an excellent sheltered landing place and harbor for boats of considerable size. The first building of the new station was erected in 1917. It is of reinforced concrete construction, approximately forty feet by eighty-three feet, and three stories in height. The first floor provides a physiological laboratory, containing a large floor aquarium, divisible into three compartments by movable partitions; a concrete-floored room for the storage of boats, collecting apparatus, etc., and for the sorting of collections; a large storeroom, men's lavatory, furnace room, photographic dark room, and janitor's rooms.

The second floor, into which the main entrance opens, is devoted to the three large general laboratories, accommodating twenty-eight, twenty-eight, and twenty-four students, respectively. Two private laboratories for instructors are also provided on this floor. The third floor contains a large library, with a generous fireplace, an adjoining room for records and writing, an advanced laboratory, six commodious private laboratories for investigators, and a rest room for women. Fresh and salt water is provided in each laboratory, the sea water being pumped to a concrete tank upon the roof, whence it is distributed to the various aquarium tables. Heating is provided by a hot-air system, and electric lights and gas are installed. From the third floor a stairway gives access to the flat, parapeted roof where open-air aquaria may be set up as needed.

There are thus five laboratories available for classes and eight private laboratories for investigators.

In recognition of the aid rendered by Mr. Hopkins during the whole life of the laboratory, the Board of Trustees of the University changed the name, October 26, 1917, to the Hopkins Marine Station of Stanford University.

Work of the Station

The Hopkins Marine Station fulfills a two-fold function; first, it furnishes under exceptional natural advantages elementary and advanced instruction in biology; second, it provides for research work.

The Station is open the entire year. Investigators and special students can be accommodated at any time, but regular classes are scheduled for the Summer Quarter only. The Departments of Zoology and Physiology will schedule their summer work at the Station, and not at Stanford University.

Admission and Fee

Students who are matriculated at the University may take scheduled work or special courses under the same conditions that obtain at the University. Others may enroll (as non-matriculated students) if in the judgment of the instructor they are sufficiently prepared.

A General Fee of seventy-five dollars per quarter is payable by all undergraduates taking regular courses or pursuing special work; for graduate students the General Fee is fifty dollars per quarter. No other fees are charged. (For the summer quarter of 1921 the General Fee was forty dollars.)

To investigators prepared to carry on research, the use of the Station facilities is tendered free of charge.

Students must register for regular courses on the days specified in the University Calendar. Late registration will be permitted only with the approval of the director and of the instructors concerned.

1. General Zoology.—A course designed to give a general view of the animal kingdom—the types of animals, general life processes, life histories, structure, development, and classification. Excursions will be made to various points along the shore in order that students may collect and observe living animals.

This course is closely coördinated with Elementary Physiology, and concurrent registration in that course is required.

5 units (Van Wagenen) MTWThF 10–12
summer, 11

2. The Classification and Ecology of Marine Invertebrates.—The object of this course is to give the student the widest possible acquaintance with the animals which live along shore and in the plankton of Monterey Bay. While an extensive knowledge of invertebrate forms is aimed at, some one group, in which the student becomes interested, will be studied more intensively. The prescribed work will also include a study of the associations of animals, their distribution, and something of their behavior, or simple reactions.

5 units (Fisher) MTWThF 10–12
summer, 11

3. Vertebrate Embryology.—A study of the development of the chick.

5 units (Van Wagenen) ThF afternoons, S 8–12
summer, 4

4. Zoology Research.—Research or special work in the field of morphology, taxonomy, and ecology of invertebrates.

(Fisher) Hours and credit by arrangement
summer, 4

4a. Comparative Anatomy.

5 units (Starks)
summer, 2

5. Elementary Physiology.—This course is designed to give a general survey of the physiology of living things with special reference to marine animals and plants, and the application of the fundamental principles thus developed to the functions of other forms, including man.

Textbook: The Human Body, Martin, Advanced Course, tenth edition.

For the regularly enrolled undergraduates the requirement will be concurrent registration in General Zoology.

5 units (Weymouth, Baumberger, Olmsted) Lec. T 1:30–2:30; Lab. MWF 1:30–4:30
summer, 14

6. General Physiology.—Advanced instruction and research in general physiology.

(Weymouth, Baumberger) By arrangement
summer, 4

7. Systematic Botany and Plant Distribution.—A study of the fundamental principles of plant relationships with special reference to the higher plants. Through the study of representative species and supplementary classification it is intended to acquaint the student with the more important families of flowering plants. In the field work special attention will be given to associations and the factors controlling distribution.

5 units (Abrams) ThF afternoons, S 8–12
summer, 9

8. English Composition (English 2).—The study and practice of exposition.

3 units (Mirrielees) MWF 8–9
summer, 11

9. English Classics (English 10).—A study of representative works of great English writers, with assigned reading and discussion.

5 units (Mirrielees) MTWThF 9–10
summer, 10

10. Free Reading (English 13).—General reading under direction, in the field of the student's own interest, with weekly meetings for discussion of the reading done.

2 units (Mirrielees) Hours by arrangement
summer, 10

A full quarter's schedule of 15 units may be taken by registering for three 5-unit laboratory courses, or for one or two laboratory courses, with the balance in courses 8, 9, 10. Courses 1, 3, and 5, or 1, 5, and 7, will count toward the requirement in biology for those desiring to register in Medicine, while courses 8, 9, and 10 will fulfill the English requirements of medical students. Courses 1, 2, and 3 are major requirements in the Department of Zoology, and course 3 is also required of medical students.

LATIN

HENRY RUSHTON FAIRCLOUGH, Professor.
JEFFERSON ELMORE, BENJAMIN OLIVER FOSTER, Associate Professors.
DOROTHY GILSON, Assistant in Instruction.

MAJOR STUDENTS

The Department recognizes three classes of major students: (1) those who wish to pursue a course of liberal studies, including Latin as a prominent feature; (2) those who desire such a course as preliminary to professional studies; (3) those who, expecting to teach Latin, desire to be properly equipped for that purpose.

Major students who wish to qualify for teaching Latin must take courses 3, 4, 6, 7, 8, 9, 10, 11, and 17, together with such other courses as are recommended by the Department. To other students more freedom of choice is allowed.

Students of other departments who wish to acquire a teaching major or minor in Latin should refer to the announcements of the School of Education, or consult some member of the Latin department. As a rule 28 units will be accepted as satisfying the requirement for a minor and 43 for a major.

I. UNDERGRADUATE COURSES

TRANSLATION, COMPOSITION, SYNTAX, ORAL

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

1a. Easy Prose.—Copious selections from the Latin Vulgate (with informal discussions of its literary and historical importance); parts of Quintus Curtius's history of Alexander, some of the simpler letters of Cicero; selections from the Colloquia of Erasmus. The course is intended for first-year students who have had two years of high-school Latin and for others who wish to acquire facility in reading.

4 units, autumn quarter (ELMORE) MTWF 11
autumn, 8

1b. Ovid and Virgil.—Selections from the Metamorphoses, Book I of the Aeneid. This course is intended for students who have taken course 1*a*, but is also open to others who have had two years of high-school Latin.

4 units, winter and spring quarters (GILSON) MTWF 11
winter, 3; spring, 3

3. **Terence and Cicero.**—The Andria of Terence and the De Senectute of Cicero. Open to those who have completed course 1, or who have offered entrance subject 8*b*.

4 units, autumn and *summer quarters (FOSTER) MTWF 9
autumn, 9; summer, 1

4. Catullus and Horace.—Selections from Catullus and the Odes and Epodes of Horace. This course is complementary to course 3, but may be taken independently of it by those who have had course 1 or an equivalent.

4 units, winter and *summer quarters (FOSTER) MTWF 9
winter, 9

4a. Elegy.—Selections from the elegies of Tibullus, Propertius, and Ovid. This course is open to those who have had the equivalent of four years of Latin in the high school.

4 units, spring quarter (FAIRCLOUGH) MTWF 9
spring, 9

5. Legal Latin.—The Institutes of Gaius or Justinian are read both as a training in language and as an introduction to the main principles of Roman law. The course is useful to all who desire a first-hand knowledge of Roman law and of the origins of European social institutions. Open to all students who have had three years of Latin.

3 units, autumn, winter, and spring quarters (FAIRCLOUGH) MWF 10
autumn, 3; winter, 4; spring, 3

5a. Christian Latin.—History of the Latin Vulgate. Introduction to popular and medieval Latin. Reading of the Vulgate text of the Acts of the Apostles. Graeco-Roman civilization of the 1st century. Open by permission of the instructor to those who have had three years of high-school Latin.

2 (or 3) units, spring and *summer quarters (ELMORE) TTh 8
spring, 6; summer, 7

6. Prose Composition I.—The exercises are not based on a Latin text, but are drawn from present-day affairs and events, with the aim of imparting some facility in original composition.

2 units, autumn and winter quarters (ELMORE, FOSTER) TTh 9
autumn, 8; winter, 6

7. Horace.—Satires and Epistles. Open to students who have had courses 3 and 4, or an equivalent. Attention is directed especially to the style and subject-matter, to Horace's influence on Latin literature, and to the salient features of the Augustan Age.

3 units, autumn quarter (FAIRCLOUGH) MTWF 9
autumn, 4

8. Livy and Tacitus.—Selections from Livy's History and the Histories of Tacitus.

3 units, winter quarter (FOSTER) MTWF 9
winter, 3

10. Comedy.—Three of the following plays: Plautus, Trinummus, Captivi, Menaechmi, Rudens; Terence, Phormio, Adelphoe.
4 units, winter quarter (FAIRCLOUGH) MTWF 11
winter, 2

11. The Letters of Cicero.—Selections from the correspondence are read with a view to studying Cicero's character and the political and social conditions of the period.
4 units, autumn quarter (FOSTER) MTWF 8
autumn, 4

12. Syntax.—A study of the main features of Latin syntax, with especial reference to its development in late Latin and in the Romanic languages.
2 units, autumn quarter (ELMORE) MTh 2:05–3:05

14. Juvenal and Martial.—Selections. Open to Seniors and other properly qualified undergraduates.
4 units, spring and summer quarters (ELMORE) MWF 2
spring, 4; summer, 3

14b. Martial.—Reading of selected epigrams. Study of the civilization of the period. Open to those who have had four years of high-school Latin.
3 units (ELMORE) MWF 10

17. Teachers' Course.—Lectures and conferences on methods of teaching Latin. Open only to advanced students.
2 units, spring quarter (ELMORE) TTh 2:05–3:05
spring, 4

II. General Courses

These courses are designed chiefly for those who are not special students of Latin, but are interested in the literary, artistic, or historical importance of the Mediterranean civilization.

29. History of Rome.—A general course, open to all students. Stress is laid on the development of Roman imperialism and on the relation of the empire to modern civilization.
3 units, spring quarter (ELMORE) MWF 8
spring, 120

31a. Roman Art and Archaeology.—A survey of the topography, architecture, sculpture, and other art forms of ancient Rome and the provinces, illustrated with lantern slides. Open to all students.
2 units, autumn and spring quarters (FAIRCLOUGH) TTh 11
autumn, 31; spring, 36

32. Latin Literature.—Certain of the most significant poets and prose-

writers will be studied in English translations. Lectures and brief reports. Open to all students.

2 units, winter and *summer quarters (Foster) TTh 8
winter, 17; summer, 17

37. The History of Roman Civilization.—A study of the conditions of Roman life with special reference to Etruscan, Greek, and Oriental influences. Open to juniors and seniors and to others by permission of the instructor.

3 units, autumn and *summer quarters (Elmore) MWF 8
autumn, 35; summer, 43

III. Graduate Courses

These courses are open to graduates in Latin, and are most profitable to those who have had some undergraduate work in Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph. D., necessary. The aim of the courses is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22a. Pro-Seminary.—An introduction to the methods of text-criticism and interpretation of Latin authors, including practice in the collation of facsimiles of MSS., and the construction of an apparatus criticus, with lectures on the principles of emendation, and a brief working bibliography for the student beginning the post-graduate study of Latin.

2 or 4 units, autumn quarter (Foster) TTh 2:15–4:05
autumn, 3

22c. Latin Seminary.—The Aeneid of Virgil is studied in its entirety as a work of art, and selected passages are interpreted. Attention is paid to classical influence on medieval and modern literature. Students should provide themselves in advance with the Oxford text of Virgil.

2 to 4 units, winter and spring quarters (Fairclough) TF 2:15–4:05
winter, 4; spring, 4

22d. Seminary in Roman History.—The subject was the history of Roman municipal institutions. Study of the sources and reports on special problems.

3 units, autumn and *summer quarters (Elmore) MWF 2:05–3:05
autumn, 4

42a. Seminary.—Caesar's Commentaries. An introduction to the methods of textual criticism and interpretation based on the *Bellum Gallicum*. Informal lectures by the instructor and reports by the students will deal with such topics as the following: bibliography of Caesar; the manuscripts; the construction of a critical apparatus and the constitu-

tion of a text; the military antiquities of the Romans; topographical problems; interpretation of selected passages.

3 units, summer quarter (FOSTER) TTh 2:05–3:30
summer, 3

42b. Roman Municipal Institutions.

3 units (ELMORE)
summer, 1

45. Quintilian.—Book X of Quintilian is read and interpreted. Rhetoric and literary criticism among the Romans, with a survey of Greek and Roman literature.

2 units, autumn and *winter quarters (FAIRCLOUGH) TTh 10
autumn, 3; winter, 3

LAW

CHARLES ANDREWS HUSTON, JOSEPH WALTER BINGHAM, ARTHUR MARTIN CATHCART, MARION RICE KIRKWOOD, CHESTER GARFIELD VERNIER, CLARKE BUTLER WHITTIER, Professors.

FREDERICK GREEN (University of Illinois), WILLIAM GREEN HALE (University of Oregon), Acting Professors (Summer Quarter).

WILLIAM BROWNLEE OWENS, Associate Professor.

GEORGE EDWARD OSBORNE (University of West Virginia), BRYANT SMITH (University of Colorado), Acting Assistant Professors (Summer Quarter).

OSCAR KENNEDY CUSHING, HENRIE GRANVILLE HILL, Lecturers.

HOWARD L. BEVIS (Cincinnati bar), Lecturer (Summer Quarter).

THE LAW SCHOOL

The Law School was established, as a department of the University, in 1893. Its purpose is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum covers three academic years and constitutes an adequate preparation for the practice of law in any English-speaking jurisdiction. Elective courses in Common Law Pleading, Code Pleading, and California Practice are offered.

A comprehensive group of courses in Public Law, of value not only to the law student but to the student who contemplates entering the diplomatic, consular, or other government service, is a feature of the curriculum. A similarly comprehensive group of courses in Commercial Law is provided to meet the needs of students seeking preparation for the various business vocations.

By taking advantage of the four-quarter system, with its opportunities for summer instruction, the Law curriculum may be completed in two and one-fourth calendar years.

Only college graduates and students who have completed substantially two years of work in this University, or its equivalent elsewhere, are admitted as regular students. Under certain conditions persons who can not meet these requirements, but who are eligible for admission to the University as regular students, may be admitted to the Law School as unclassified students, not candidates for a degree.

The Library

The Law Library contains 25,000 volumes, including complete sets of the English, Irish, Scotch, Australian, and Canadian reports, the reports of all Federal Courts, a practically complete set of the reports of the American States, the Australian States, and the Canadian Provinces, the National Reporter system, the standard collections of cases, the standard English and American legal encyclopedias, the principal American, English, and Canadian digests and citators, sets of the leading American, British, Canadian, and Continental legal periodicals, together with a good collection of textbooks. There is also a somewhat complete collection of compiled laws, session laws, and other statutory material, both Federal and State, as well as British, Canadian, and Australian.

Admission to the Law School

Admission to the professional curriculum in law is granted to students duly enrolled in the University, as follows:

I. To students who have received the degree of Bachelor of Arts, or an equivalent degree, from this University or some other institution of recognized collegiate rank.

II. To students who have received credit for substantially two years of work (80 units) offered by this University, including the six units of English Composition; or the substantial equivalent of these 80 units in some other institution of recognized collegiate rank.

III. In the discretion of the Faculty of Law, to students who can not meet the foregoing requirements, but who are eligible for admission to the University as regular students. Such students are termed "unclassified," and are given a certificate in lieu of the degree conferred upon regular students.

Admission to Advanced Standing

The Law School is a member of the Association of American Law Schools and grants admission to advanced standing only in compliance

with the rule of the Association, as follows: Full advanced standing may, in the discretion of each member, be granted to students, but only for work done in schools which are members of this Association. In exceptional cases students from schools not members of this Association may be given advanced standing, but not higher than the second or junior year, and then only after thorough written examinations in the first-year courses in contracts, torts, and real and personal property have been passed; provided, that if any one of these subjects is not regularly given in the first year, some other fundamental first-year subject may be substituted therefor.

The Degree of Bachelor of Arts

Students registered in the Law School will be recommended by the Law Faculty for the degree of Bachelor of Arts in the pre-legal curriculum as follows:

1. Students admitted to the University on or after October 1, 1920, upon the completion of the number of units and grade points required by the University for graduation with the Bachelor's degree, provided that these units shall have included: (*a*) The work of Lower Division or its substantial equivalent in some other institution; (*b*) studies under the guidance of the Law Faculty covering ninety units. These studies must include the first-year professional law courses. All the other courses are elective, subject to the approval of the Faculty of Law. Additional professional law courses not to exceed twenty-seven units may be chosen. As a general rule the elective studies should be mainly selected from the departments of Economics, English, History, Law, Philosophy, and Political Science.

Attention is directed to the course in Roman Law given in the Latin Department.

It will be noted that under this arrangement a student who wishes to pursue more than three years of law studies while in the University may count sixty-five units, substantially one and a half years of professional work toward his A. B. degree.

2. Students admitted to the University prior to October 1, 1920, may at their option complete the program for the degree of Bachelor of Arts upon which they have begun, or substitute the plan outlined in (1) above.

The Degree of Juris Doctor

Students who have received the degree of Bachelor of Arts, or its equivalent, from this University or from some other institution of recognized collegiate rank, and who have satisfactorily completed courses in law aggregating 115 units (the equivalent of three full years of pro-

fessional study of law), and who have otherwise satisfied the requirements of the University and of the Law School, will be granted the degree of Juris Doctor (J. D.). Since a limited number of units of law studies may be counted toward the degree of Bachelor of Arts (see above), the requirement for the degree of Juris Doctor may be satisfied by four years of undergraduate and two years of graduate study. It is insisted, however, that not more than forty of the units of credit in law received by a student while an undergraduate in this or another university shall be counted toward the degree of Juris Doctor; except that a student who has, while an undergraduate, accumulated more than forty units of credit in law, may count toward the degree of Juris Doctor such of the additional units as have not been counted toward his A. B. degree.

[Note.—Students who are recommended by the Faculty of the Law School for the degree of Bachelor of Arts in the pre-legal curriculum may satisfy the requirements for the degree of Juris Doctor by two additional years of professional law study.]

Candidates may be presented for graduation in January, April, June, and October. No degree will be conferred upon any person who has not spent at least one academic year in residence at this University and received during that time forty-five units of credit, of which at least thirty-eight must be in professional law courses; nor upon anyone who has not spent at least nine quarters of resident study in this or some other recognized law school.

Curriculum

Fundamental courses, which are listed below as first-year courses, are prescribed. Courses listed as second- and third-year courses may be taken in any order consistent with their special prerequisites, but the courses in Administrative Law, Conflict of Laws, Constitutional Law, Private Corporations, Municipal Corporations, Evidence, and California Practice may not be taken, ordinarily, before the third year.

Preliminary Courses

[Open to students of all departments who have 45 units of credit, and required of students in the Law School.]

1. Introduction to the Study of Law.—Nature, sources, and sanction of law; outline of the historical development of English and American courts and procedure; the content, classification, and determination of rules of law, including a consideration of legal rights and duties, the doctrine of *stare decisis* and the development of some of the more elementary rules of law by combining and comparing decisions; use of law books and the law library. Textbook to be announced.

4 units, spring quarter (Kirkwood)
spring, 103

First-Year Courses

2a. Contracts I.—Mutual assent, including offer and acceptance; the statute of frauds; illegality; contracts under seal; joint and several contracts. Williston, Cases on Contracts, and selected cases.

5 units, autumn quarter (Whittier) MTWThF 9
autumn, 72

2b. Contracts II.—Consideration; beneficiaries; assignments; express conditions. Williston, Cases on Contract, selected cases. Prerequisite: Contracts I.

6 units, winter quarter (Whittier) MTWThFS 9
winter, 69

2c. Contracts III.—Defenses arising from breach of implied conditions, prevention, incapacitation and repudiation; excuses for nonperformance of conditions; anticipatory breach; impossibility; discharge of contracts. Williston, Cases on Contracts, and selected cases. Prerequisites: Contracts I and II.

4 units, spring quarter (Whittier)

3a. Torts I.—Principles of tort liability as developed in the action of trespass; justification and excuse; negligence as a basis of liability; common law and statutory duties of care; legal cause; contributory negligence. Ames and Smith, Cases on Torts (Pound's ed.), and selected cases.

4 units, autumn quarter (Cathcart) MTWF 11
4 units, summer quarter, 1st half (8 recitations weekly) Cathcart)
autumn, 54; summer, 22

3b. Torts II.—Trespass on land by animals; injuries by animals; dangerous use of land; deceit; defamation, slander, libel, privilege, malice; malicious prosecution; interference with social and business relations, inducing breaches of duty, fair and unfair competition, strikes, boycotts, business combinations. Ames and Smith, Cases on Torts (Pound's ed.), and selected cases.

4 units, winter quarter (Cathcart) MTWF 11
winter, 87

4. Criminal Law.—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses; crimes against the person, larceny and allied offenses, crimes against the dwelling-house, conspiracy. Case book to be announced.

6 units, spring quarter (Vernier) MTWThFS 10
spring, 72

5. Introduction to the Law of Real Property.—Tenure; estates in land with reference to quantity, absolute and qualified character, the time of enjoyment, number and connection of owners, marital interests,

creation and transfer at the common law and under the statute of uses. Kirchwey, Readings on Law of Real Property, and selected cases.

3 units, winter quarter (KIRKWOOD) TThF 2:05
3 units, summer quarter, 1st half (6 recitations weekly) (KIRKWOOD)
winter, 73; summer, 18

6. Agency.—Nature of relation; appointment; liabilities of principal for agent's torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal doctrines; delegation of agency; termination; ratification. Prerequisites: 8 units of Contracts (Law 2) and 4 units of Torts (Law 3). Wambaugh, Cases on Agency.

6 units, spring quarter (HUSTON) MTWThFS 8
spring, 78

7. Personal Property.—Possession: nature, importance, and legal effect. Possessory Interests: arising from tenancy, bailment, lawful seizure. Finding: possession without right. Certain methods of acquiring title to chattels: status of limitations; gifts inter vivos; accession; confusion, etc. Liens and pledges; conversion. Warren, Cases on Property.

4 units, autumn quarter (OWENS) MTThF 8
4 units, summer quarter, 2d half, (8 recitations weekly) (OWENS)
autumn, 96; summer, 22

SECOND- AND THIRD-YEAR COURSES

9. Restraint of Trade.—Contracts and combinations in restraint of trade both at common law and under modern statutes, especially the Sherman Anti-Trust Act and the Clayton Act. Contracts accompanying the sale of a business or of property; exclusive contracts of sale and purchase; contracts of buyers to keep up prices on resale. Combinations and competitive methods of labor units, of trade or manufacturing units, and of public service units. (No law credit if taken before Law 2 and 3.) Kales, Contracts and Combinations in Restraint of Trade; also selected cases.

4 units, spring quarter (CATHCART)

10. Constitutional Law I.—Making and changing constitutions; function of judiciary in enforcing constitution; separation and delegation of powers; political rights; personal liberty; interstate privileges and immunities of citizens; operation of fourteenth amendment; due process and equal protection of law; procedure; police power; taxation; eminent domain. (No law credit if taken before Law 2 and 3.) Hall, Cases on Constitutional Law.

3 units, winter quarter (CATHCART) MWF 9
winter, 51

11. Constitutional Law II.—General scope of federal powers; foreign relations, Indians, aliens; territories, dependencies, new states; federal taxation; regulation of commerce; intergovernmental relations; pro-

tection to persons accused of crime; retroactive laws in civil cases; state laws impairing obligation of contracts; jurisdiction of federal courts. (Course 10 not a prerequisite.) (No law credit if taken before Law 2 and 3.) Hall, Cases on Constitutional Law.

3 units, spring quarter (CATHCART) MWF 9
spring, 39

12. Administrative Law and Public Officers.—Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders; habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. (No law credit if taken before Law 2 and 3.) Freund, Cases on Administrative Law.

4 units, winter quarter (HUSTON) [Not given in 1920–21]

13. Municipal Corporations.—Nature; creation; alteration, and dissolution; internal organization; powers; liabilities on contract and for torts; remedies. Open to students having 65 units of credit in law. Macy, Cases on Municipal Corporations, and selected California cases.

4 units, winter quarter (HUSTON) MTThF 10
winter, 16

14. Public International Law.—Nature of International Law, relation to Municipal Law. International relations in time of peace; definition, recognition, and classification of states; jurisdiction on land and on the high seas; acquisition and transfer of jurisdiction; non-belligerent settlement of international controversies. International relations as modified by war; effect of war as between enemies; relations between belligerents and neutrals. Open to all law students and to students in other departments by permission. (No law credit if taken before Law 2 and 3.) Case book to be announced.

4 units, winter quarter (HUSTON) MTThF 3:05
winter, 25

15. Private International Law (Conflict of Laws).—A study of the influence which considerations of the jurisdiction of a state and considerations of foreign law have upon the decisions of courts in cases involving events or things or persons under foreign jurisdiction. The study includes particularly questions of the jurisdiction of states and of courts, of the effects of foreign judgments and decrees, of legal domicile, of marriage and marital interests, of divorce, of legal capacity, of incorporation, of the devolution and control of estates of decedents, of liability for alleged torts or breaches of contract, and of the existence, extent, control, and disposition of property interests. First quarter prerequisite to second quarter. Beale, Cases on Conflict of Laws (larger edition).

3 units, autumn quarter; 4 units, winter quarter (BINGHAM)
autumn, 9; winter, 6

16. Admiralty.—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, *ex contractu, ex delicto,* priorities, discharge; bottomry and respondentia obligations; salvage; general average. Ames, Cases on Admiralty.

3 units (KIRKWOOD) [Not given in 1920–21]

17. Roman Law.—A comparative study of some leading conceptions of the Roman Law, and its modern developments in the Civil Law of Continental Europe and America, with the related conceptions of the Anglo-American Common Law. Required reading.

3 units (HUSTON) [Not given in 1920–21]

18. Title to Land.—I. Original titles founded on possession, prescription, and accretion. II. Modern conveyancing: execution of deeds, description of the property conveyed, creation of easements by implication, covenants for title, estoppel by deed, fraudulent conveyances, recording. Aigler, Cases on Titles to Real Property.

5 units, winter quarter (KIRKWOOD)

19. Landlord and Tenant.—Creation of relationship; duration of tenant's interest, remedies of landlord for non-performance of tenant's obligations, remedies of tenants against landlord, covenants running with the land as between landlord and tenant, rights and duties of landlord and tenant with respect to third persons. Case book to be announced.

3 units, spring quarter (KIRKWOOD) TThF 2
spring, 37

20. Rights in the Land of Another.—Natural rights, easements, covenants running with the land, public rights, franchises, rents. Gray, Cases on Property, Vol. IV (2d ed.), and selected cases.

3 units, autumn quarter (KIRKWOOD)

21. Wills.—Devolution of property of a decedent by intestate succession. The nature of wills and testaments. Probate and its effect. Testamentary capacity. Testamentary intent. Effect of fraud, undue influence, or mistake on the validity of a will. Formalities essential to execution of a valid will. Incorporation by reference. Nullification of wills by (1) revocation; (2) ademption or lapse of legacies or devises; (3) by other circumstances. Repudiation of wills. Gray's Cases on Property, Vol. IV (2d ed.), and selected cases.

4 units, winter quarter (BINGHAM)
winter, 12

22. Future Interests.—Vested and executory interests; construction of limitations of future interests; powers. Prerequisite: course 5. Kales' Cases on Future Interests.

5 units, autumn quarter (BINGHAM) MTWThF 8
autumn, 7

23. The Law Against Perpetuities and Restraints on Alienation.—The common law rule against perpetuities. Illegal conditions; restraints on alienation. The California law on perpetuities and restraints on alienation. Prerequisite: credit for course 22. Kales' Cases on Future Interests, and selected statutes and cases.

3 units (BINGHAM) [Not given in 1920–21]

24. Water Rights.—A course in the intensive study of the law of water supply rights with special reference to water rights in the Western States. Extent of riparian rights and liberties; the law of prior appropriation; relative validity of titles to riparian and non-riparian rights and liberties of use; extinguishment of riparian rights; rights in diffused and underground water; rights in interstate streams. Federal and state powers of control. Bingham's Cases on Water Rights.

4 units, autumn quarter (BINGHAM)

25. Mining Law.—A course on mining titles under the Federal mining acts, with especial reference to mining rights in the Western States and Alaska. Costigan, Cases on Mining Law.

4 units, winter quarter (BINGHAM)

26. Persons and Domestic Relations.—Infants: period of infancy; infants' contracts and conveyances, torts, and crimes. Husband and wife; rights of husband as to wife's property; rights of each as to earnings, services, and society of the other; husband's interest in damages for tort to wife; husband's liability for torts or contracts of wife; husband's duty to support wife and wife's authority to bind husband by her contracts; married women's contracts, conveyances, and devises; estoppel of married women; liability of married women for torts and responsibility for crimes; contracts, conveyances, and suits between husband and wife; husband's right to custody of wife. Marriage: promise to marry and breach; marriage as a contract or relation; annulment; divorce; separation. Woodruff, Cases on Domestic Relations.

4 units (VERNIER) [Not given in 1920–21]

26a. Persons and Domestic Relations.—Topic of husband and wife and marriage and divorce. A short course covering one-fourth of the regular course 26.

1 unit, summer quarter, 2d half (2 recitations weekly) (SMITH)
summer, 12

27. Quasi-Contracts.—Origin and nature of quasi-contracts: benefits conferred in misreliance on right or duty; general principles; misreliance resulting from mistake of law; misreliance on invalid contract, on contract unenforceable because of Statute of Frauds, on illegal contract, on contract impossible of performance, on contract unenforceable because

of breach, on supposed requirement of valid contract, on non-contract obligation, on ownership of property; benefits conferred through dutiful intervention in another's affairs; benefits conferred under constraint; constraint of duress, of legal proceedings, of tax or assessment; action for restitution as alternative remedy for breach of contract and for tort. Thurston, Cases on Quasi-Contracts.

4 units, autumn quarter (CATHCART) MTWF 9
autumn, 58

28. Public Utilities.—The nature, rights and duties of public service callings and businesses under the common law; railroads and canals; telephone and telegraph; gas, water, irrigation, and other public utilities. The legislative and administrative regulation of public utilities under the police power, especially rate regulation. The Interstate Commerce Act: scope of commerce regulated by the Act; duties of carriers under the Act; functions of the Interstate Commerce Commission and of the courts in the enforcement of the Act. Burdick, Cases on Public Service, and Frankfurter, Cases under the Interstate Commerce Act.

4 units (CATHCART) [Not given in 1920–21]

29. Bailments and Carriers.—Bailments in general, including bailments for hire, for services to be performed, and for hired use. Special classes of bailments involving ordinary liability; pledges; warehousemen. Special classes of bailments involving exceptional liability; innkeepers; common carriers of goods; common carriers of passengers. Green, Cases on Carriers.

4 units, summer quarter, 1st half (8 recitations weekly) (GREEN)
summer, 38

30. Sales.—Subject-matter of the contract; transfer of property and title; destruction of the goods and risk of loss; obligations of seller and buyer; rights of unpaid seller against the goods; remedies of the seller on the contract; remedies of the buyer on the contract; Statute of Frauds. Woodward, Cases on Sales.

6 units, autumn quarter (VERNIER) S 9; MTWThF 2:05
autumn, 49

31. Bills and Notes.—Negotiability; form and inception, form of bill and of note, acceptance, delivery, consideration; negotiation, transfer, holder in due course; liability of parties, maker and acceptor, drawer and indorser, transferor; discharge; effect of the Negotiable Instruments Law. Colson's Huffcut's Cases on Bills and Notes.

6 units, winter quarter (VERNIER) W 10; MTWThF 2:05
winter, 27

32. Partnership.—Nature of a partnership, its purposes, and members;

creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Gilmore, Cases on Partnership.

4 units, autumn quarter (OWENS) MTThF 3:05
autumn, 32

33. Private Corporations.—The nature of a corporation; promotion of corporations; corporate powers; corporate liability for torts and crimes; unauthorized corporate action, including doctrines of *de facto* incorporations; and *ultra vires* acts; officers, stockholders, and creditors of corporations; reorganization of corporations. Warren, Cases on Corporations (2d ed.).

6 units, autumn quarter (HUSTON) MTWThFS 10
autumn, 35

34. Insurance.—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepresentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation; waiver, estoppel, election; powers of agents; assignees and beneficiaries.

4 units, summer quarter, 1st half (8 recitations weekly) (BEVIS)
summer, 17

35. Suretyship.—Personal suretyship compared with real suretyship (mortgages, pledges, liens, etc.); suretyship obligations compared with insurance and indemnity obligations; guaranty and other forms of suretyship in relation to the Statute of Frauds; suretyship in transactions involving negotiable instruments; fidelity contracts and judicial bonds; surety's defenses due to original defects in his obligation or to its subsequent discharge; surety's right to subrogation, indemnity, contribution, or exoneration; creditor's right to surety's securities. Ames, Cases on Suretyship.

4 units, spring quarter (VERNIER)

36. Mortgages.—All forms of mortgage security, both real and chattel; essential elements of legal and equitable mortgages; legal and equitable rights, powers and remedies of mortgagor and mortgagee with respect to title, possession, rents and profits, waste, collateral agreements, foreclosure, redemption; priorities; marshaling; extension of mortgages; assignment of mortgages; discharge of mortgages. Kurchwey, Cases on Mortgage.

4 units, summer quarter, 1st half (8 recitations weekly) (OSBORNE)
summer, 16

37. Equity I: Contracts.—Development and nature of equity jurisdiction; specific performance of contracts; reformation and rescission of contracts. Ames, Cases on Equity Jurisdiction, Vols. I and II.

5 units, autumn quarter (KIRKWOOD)

38. Equity II: Trusts.—The Anglo-American system of uses and trusts. Nature of a trust; other sorts of interests and relations distinguished; the creation, transfer, and extinguishment of trust interests, express, resulting, and constructive; validity of trusts; effect of statutes; charitable trusts; priorities and relative validity of competing equities; importance of the legal title to one claiming adversely to a trust or other equitable interest; remedies of creditors against the trust property; duties of the trustee. Scott, Cases on Trusts.

6 units, spring quarter (BINGHAM)

39. Equity III: Torts and Special Equitable Remedies.—Specific reparation and prevention of torts; bills of interpleader; bills of peace; bills *quia timet*: cancellation of contracts, removal of clouds on title, perpetuation of testimony, bills to secure rights of future enjoyment; bills of account. Ames, Cases on Equity Jurisdiction, Vols. I and II.

3 units, spring quarter (KIRKWOOD)

40. Damages.—Respective functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Beale, Cases on Damages (2d ed.).

3 units, summer quarter, 2d half (6 recitations weekly) (SMITH)
3 units, winter quarter (HUSTON)
summer, 30

41. Bankruptcy.—Jurisdiction of the United States and the several States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; what property passes to the trustee; provable claims; duties and powers of the bankrupt and his trustee; protection, exemptions, and discharge. Williston, Cases on Bankruptcy.

4 units, spring quarter (VERNIER) TWFS 8
spring, 26

42. Common Law Pleading.—The common law forms of action, especially the causes of action which could be litigated in each form of action and the relation of the forms of action to each other: the substantial allegations required in a declaration or complaint founded on any of the more usual causes of action at law; the pleas of the defendant, the defenses available under each and especially the nature and scope of the common law general issues. Principles of pleading dealt with in the course on Code Pleading, so far as possible, will not be

considered in this course. Whittier and Morgan, Cases on Common Law Pleading.

4 units, autumn quarter (WHITTIER) TWThF 11
autumn, 13

43. Code Pleading.—The civil action; parties; splitting and joining actions; the complaint, including the caption, the statement of facts and the prayer for relief; the answer, including general and specific denials, affirmative defenses and counterclaims; the demurrer; the reply; motions; bills of particulars; amendment and aider; construction of pleadings. Open to students having 65 units of credit in law. Selected cases.

4 units, spring quarter (CATHCART) MTWF 11
spring, 33

44. Evidence I.—Introductory topics: Witnesses: competency; privilege; examination; impeachment; rehabilitation. Rules of exclusion: conjectural evidence; character evidence; hearsay and the exceptions to its exclusion; opinion. The proof of writings: authorship; contents. Real evidence. Open to students having 65 units of credit in law. Thayer, Cases on Evidence (2d ed.).

6 units, spring quarter (WHITTIER) MTWThFS 8
spring, 23

45. Evidence II.—This course deals with certain procedural and substantive law topics commonly considered in connection with evidence though not strictly a part of that subject. They are: functions of court and jury; judicial notice; presumptions; burden of proof; the parol evidence rule including construction of instruments. Open to students having 65 units of credit in law. Thayer, Cases on Evidence (2d ed.).

4 units, summer quarter, 2d half (8 recitations weekly) (HALE)
summer, 24

46. California Practice I.—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appearances, provisional remedies, such as attachment, arrest, etc., *lis pendens* the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; probate and administration proceedings. Prerequisite: course 43. Open to students having 65 units of credit in law. California Code of Civil Procedure; also selected California cases.

3 units, winter quarter (OWENS) WFS 8
winter, 30

47. California Practice II.—Trial practice, special proceedings, including writs of certiorari, mandamus, and prohibition; introduction to

jurisdiction and procedure of Federal courts. Prerequisites: courses 43 and 46. Open to students having 65 units of credit in law. California Code of Civil Procedure; also selected California cases.

3 units, spring quarter (OWENS) MWF 1:05
spring, 21

48. Moot Court.—

A. Instruction in Legal Bibliography and the use of law books.

B. Argument of cases on submitted statements of facts; briefs; preparation of opinions.

2 units, spring quarter (OWENS) MTh 8
spring 5

48a. Moot Court.—A. Instruction in Legal Bibliography and the use of law books.

1 unit, summer quarter, first half (2 recitations weekly) (KIRKWOOD)
summer, 16

49. Business Law.—Contracts, their foundation, operation, and discharge; sales of goods; insurance; suretyship and guaranty; bailments and carriers; negotiable instruments; principal and agent; master and servant; partnerships and joint-stock companies; corporations; property in land and movables; mortgages; landlord and tenant. This course may not be taken by law students, but is open to all other students who have 80 units of credit. Bays, Cases on Commercial Law; also selected cases.

3 units, winter and spring quarters (continuous) (OWENS) MWF 11
winter, 103; spring, 74

50. Problems in Judicial Administration.—The difficulties of judicial organization and procedure with the remedies adopted or proposed. Special topics such as: courses of procedural law, statutes and rules of court; selection and tenure of judges; court organization; special courts; arbitration and conciliation; the bar; legal aid; costs; simplification of pleadings; rules of evidence; the jury; appeals; uniformity. Primarily for graduate students but open to well prepared undergraduates in their fourth year upon obtaining permission from the instructors. Should be preceded when possible by the courses in practice, pleading and evidence. May not be counted toward a degree in law unless the student previously has obtained credit in Law 2 and 3.

4 units, spring quarter (WHITTIER, OWENS)

SPECIAL LECTURES

In addition to the regular professional courses, a few special lectures, most of them of a practical character, are given each year by experienced lawyers of the California Bar.

LIBRARY

George Thomas Clark, Librarian.
Charles V. Park, Assistant Librarian.
Helen Binninger Sutliff, Chief Cataloguer.
Alice Newman Hays, Reference Librarian.
Elizabeth Hadden, Chief Order Division.
Louise Ophüls, Medical Librarian.
Minna Stillman, Document Librarian.
Gilbert Henry Jertberg, Law Librarian.

The Library is open during term time on week days from 8 a. m. to 10 p. m., except on Saturdays, when it is closed at 5 p. m. The main reading room, periodical room, and Timothy Hopkins room are open on Sundays from 2 p. m. to 6 p. m. During vacations the hours are from 8:30 a. m. to 4:30 p. m., Saturdays to 12:30 p. m. The shelves are open to members of the faculty, and, on recommendation of their instructors, to students engaged in advanced work. Books, other than works of reference, not required for class use, are lent for a period of two weeks. A handbook giving complete information relative to the Library and how to use it has been published, and will be mailed upon request.

The Library is available for use by all registered students without the payment of additional fees. Visitors regularly attending lecture courses or other university exercises, but not registered, are entitled to the privileges of the library upon payment of a fee of $1.25 per quarter.

The Library building is well adapted to meet the needs of advanced and graduate students. It contains nine rooms in which seminar classes may be held; and one large room which serves as a reading room for students in seminar classes. Tables on each floor of the stack make it possible for any graduate student to work in easy reach of the material in his field. The document division serves to make accessible the university's large collection of city, state, and federal documents, which is particularly strong in United States, British, Australasian, and Canadian documents. The 35,000 volumes now assembled in this room offer a rich and varied field for research.

Including the departments of law and medicine, the Library contains upward of 330,000 volumes. The income of the Jane Lathrop Stanford Jewel Fund, certain other special funds, and fees provide for its maintenance and growth. Noteworthy special collections, besides various special collections in history and literature, are as follows:

THE JORDAN LIBRARY OF ZOOLOGY.—A collection consisting largely of works on ichthyology, to a considerable extent made up of a vast number of authors' separates, which have been accumulated by Chancellor JORDAN, bound in convenient form, indexed, and catalogued. The more voluminous publications, such as the works of Cuvier, Lacépède, Bloch, Bleeker, Günther, and others, are well represented. These, supplemented by the proceedings of various societies and institutions, make a collection of books of great value to advanced students and investigators in ichthyology. The library is conveniently arranged, in the zoology building near the laboratories and collections.

THE BARBARA JORDAN LIBRARY OF BIRDS.—A memorial collection presented by Chancellor JORDAN, to which frequent additions are made. While some of the older texts are not represented, it is a good working library of ornithology and contains the principal modern works.

THE BRANNER GEOLOGICAL LIBRARY.—The geological library (room 333) is the result of twenty-five years of painstaking acquisition by Dr. JOHN CASPER BRANNER. It includes a vast wealth of material relating to geology, paleontology, mineralogy, geography, mining and metallurgy. It is especially well equipped with files of journals and the transactions of scientific societies, together with a large collection of state and government reports.

THE HOPKINS RAILWAY LIBRARY.—A collection of approximately 10,000 volumes and pamphlets dealing with the subject of transportation. In 1892 Mr. TIMOTHY HOPKINS, of San Francisco, presented to the university his private library on railroads, consisting of about 2,000 books, personally providing for its maintenance and growth for many years. The collection is general in scope, intended to embrace all subjects touching on the building, maintenance, and operation of railways. It is especially rich in state and government reports, as well as in reports of individual railroads both in the United States and Europe, with much material pertaining to their history.

HOOVER WAR COLLECTION.—Contains some seventy thousand printed and manuscript items on all aspects of the Great War, 1914-18, and for all nations, whether warring or neutral; is especially rich in government documents, in delegation propaganda at the peace conferences, in files of the publications of social and political societies, and in newspapers. It is one of the two best collections on the subject in the country, and one of the best in the world.

THE LAW LIBRARY.—A library of about 24,000 volumes, selected with care and adequate for the study of English and American law. It contains practically complete sets of the reports of the courts of Eng-

land, Scotland, Ireland, Canada, the United States and the several states, together with a valuable collection of statutes, treatises, and periodicals.

THE LANE MEDICAL LIBRARY.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane. The library contains about 50,000 volumes, and is particularly rich in its collection of medical and allied periodicals. The leading domestic and foreign journals are currently received. The new library building, erected in 1912, is located opposite the other medical buildings, on the corner of Sacramento and Webster streets, San Francisco.

MATHEMATICS

ROBERT EDGAR ALLARDICE, RUFUS LOT GREEN, HANS FREDERIK BLICHFELDT, Professors.
DOROTHY CREVER, SADIE GILMORE HACKLEY, Assistants in Instruction.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students who wish to select Mathematics as their major subject the following program of work is recommended: In the first year, courses 3 and 4; in the second year, courses 5 and 6; in the third year, courses 10, 11, and 12; while the work during the fourth year and for graduate students may be selected from the remaining courses. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students who expect to do their major work in Mathematics are recommended to begin the study either of French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this department with one or more of the courses 1, 2, 3, and 7.

THE TEACHER'S RECOMMENDATION.—For a minor in Mathematics the following courses are required: 1, 2, 3, 4, 5, 9; for a major, course 6, in addition to these courses.

1. Trigonometry.—Elementary courses with applications involving logarithmic calculation.

4 units, autumn and *winter quarters (Crever, Hackley) (autumn) TWThF 9; (winter) TWThF 10
4 units, summer quarter (Blichfeldt) TWThF 9
autumn (3 sections), 24, 30, 16; winter, 20; summer, 16

2. Solid Geometry.—Elementary course.

3 units, winter quarter (Hackley) MWF 11
winter, 5

3. Algebra.—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorem, factors, introduction to theory of equations. Presupposes entrance credit in elementary algebra.

5 units, autumn and winter quarters (Green) MTWThF 8
4 units, summer quarter (Brinkmann) TWThF 9
autumn, 21; winter, 10; summer, 29

4. Coördinate Geometry.—An elementary course in the analytic geometry of the conic sections. Presupposes course 3.

5 units, spring quarter (Green) MTWThF 8
5 units, summer quarter (Brinkmann) MTWThF 10
spring, 13; summer, 13

5. Coördinate Geometry.—A continuation of course 4.

5 units, autumn quarter (Green) MTWThF 10
4 units, summer quarter (Blichfeldt)
autumn, 7; summer, 3

6. Differential and Integral Calculus.—An elementary course.

5 units, winter and spring quarters (Allardice) MTWThF 10
winter, 2; spring, 3

7a. General Course.—A brief and elementary survey of the principles of algebra, trigonometry, analytic geometry, and calculus. Presupposes elementary algebra and plane geometry.

5 units, winter and spring quarters (Blichfeldt) MTWThF 9
winter, 13; spring, 10

7b. General Course.—A continuation of Course *7a*: particularly of the Calculus, with an introduction to the theory of Statistics.

5 units, spring quarter (Blichfeldt) MTWThF 9

9. Plane Geometry.

4 units, autumn quarter (Allardice) MTWTh 11
autumn, 8

10. Advanced Calculus.—A continuation of course 6.

5 units, autumn quarter (Allardice) MTWThF 9
autumn, 5

11. Differential Equations.

5 units, winter quarter (Blichfeldt) MTWThF 10

12. Theory of Functions.—An elementary course.

5 units, spring quarter (Allardice) MTWThF 9
spring, 11

13. Vector Analysis.
5 units, autumn quarter (BLICHFELDT) MTWThF 11
autumn, 2

14. Modern Coördinate Geometry.
5 units, winter quarter (GREEN) MTWThF 10
winter, 7

15. Advanced Algebra.
4 units, autumn quarter (BLICHFELDT) MTWTh 10
autumn, 8

17. Mathematical Theory of Investments.—An introductory course presupposing a college course in algebra or two years of algebra in the high school; also, ability to use logarithms.
5 units, winter quarter (GREEN) MTWThF 9

18. Life Insurance.—An introduction to actuarial theory. Presupposes course 17.
5 units, spring quarter (GREEN) MTWThF 9

20. Geometry of Numbers.
4 units, spring quarter (BLICHFELDT) By arrangement

21. Projective Geometry.
5 units, winter quarter (ALLARDICE) MTWThF 11

22. Non-Euclidean Geometry.
4 units, spring quarter (BLICHFELDT) MTWTh 11

23. Selected Readings.
3 or 4 units (ALLARDICE, GREEN, BLICHFELDT) By arrangement

24. Theory of Relativity.
3 units, winter quarter (BLICHFELDT) By arrangement
winter, 4

MEDICINE

WILLIAM OPHÜLS, Dean.
GEORGE BURBANK SOMERS, Secretary of the Medical Faculty.

ADMISSION TO THE MEDICAL SCHOOL

1. Graduation from high school (or its equivalent), comprising fifteen recommended units, as defined by the University for admission to the freshman class. (*Special students* are not admitted to registration in Medicine.)

2. Three full years of college work, totaling 135 quarter units (90 semester units), of a grade equivalent to that of Stanford University

(counting as many grade points as there are units). The required work in these three years is that laid down by the Association of American Medical Colleges in English, Physics, Chemistry, and Biology, together with a reading knowledge of either French or German, and additional work in Chemistry and Biology, as indicated below.

3. In addition to the A. A. M. C. minimum in Chemistry the University requires Qualitative and Quantitative Analysis and Organic Chemistry.

In Biological Science the University requires 15 quarter units (10 semester units) made up of courses General Zoology (or General Biology), Comparative Anatomy of the Vertebrates, and General Vertebrate Embryology, substantially equivalent to the courses in those subjects given at Stanford University, as indicated below.

No conditions are permitted. Candidates for admission who in June will have completed the above requirements except for a few units in collegiate subjects should plan to make up these deficiencies in full by attendance at summer sessions.

In practice the above requirements as applied to the pre-medical courses of Stanford students work out about as follows (except that students with entrance credit in Chemistry do not take courses 2 and *a*):

CHEMISTRY

Chemistry 1 (General Inorganic Chemistry), 3 units.
Chemistry 3 (General Inorganic Chemistry), 3 units.
Chemistry *a* (General Inorganic Laboratory), 3 units.
Chemistry *b* (General Inorganic Laboratory), 3 units.
Chemistry 20, *d* (Qualitative Analysis), 5 units.
Chemistry 22, *g* (Quantitative Analysis), 5 units.
Chemistry 10 (Organic Chemistry), 5 units.
(Total in Chemistry, 28 (or 24) quarter units; 18⅔ (or 16) semester units.)

PHYSICS

Physics 1*a* (Mechanics and Heat), 5 units.
Physics 1*b* (Electricity and Light), 5 units.
Physics 1*c* (Modern Physics), 3 units.
(Total in Physics, 13 quarter units (8⅔ semester units).)

BIOLOGY

Zoology 1 (General Zoology), 5 units (or General Biology, 1, 2, and *a*, 9 units).
Zoology 11 (Comparative Anatomy of the Vetebrates), 5 units.
Zoology 13 (Vertebrate Embryology), 5 units.
(Total in Biology, 15 quarter units (10 semester units).)

ENGLISH

English, 9 quarter units (6 semester units.)

FRENCH OR GERMAN READING KNOWLEDGE

This varies somewhat with the ability of the student, but implies at least the equivalent of a year's work of 15 (quarter) units in addition to high-school courses.

(Applicants for admission or advanced standing in the Medical School should communicate with The Registrar, Stanford University, California; those desiring information concerning the upper classes of the Medical School (*i. e.*, from the sixth to the twelfth quarters), should communicate with The Dean, Stanford University Medical School, 2398 Sacramento St., San Francisco, Cal.)

The Curriculum in Medicine

The required period of study for the degree of Doctor of Medicine is twelve quarters plus the interne year. The work of the first five quarters is given at Stanford University and is devoted to anatomy, bacteriology, chemistry, embryology, histology, neurology, experimental pathology, physical diagnosis, and physiology. The next seven quarters are devoted to work in the pharmacological, pathological, and clinical laboratories, and in the hospital wards and the out-patient department in San Francisco. The last year is spent in hospital work.

In order to correlate the work of some of the departments and to facilitate research in others, all courses in Medicine, except those in anatomy, bacteriology, chemistry, and physiology, are given in San Francisco. By reducing the number of required hours to approximately the number decided upon by the Association of American Medical Colleges, the student's opportunity for taking optional and elective courses has been increased and time obtained for thesis work.

I. ANATOMY

Arthur William Meyer, Frank Mace McFarland, Professors.
Clara S. Stoltenberg, Associate Professor.
†Edgar Davidson Congdon, Assistant Professor.
Emily M. Bartlett, Assistant.

[For outline of courses see under Anatomy, p. 115.]

† Absent on leave, 1921–22.

II. BACTERIOLOGY AND EXPERIMENTAL PATHOLOGY

WILFRED HAMILTON MANWARING, Professor.

WILLIAM LUDLOW HOLMAN, EDWIN WILLIAM SCHULTZ, Associate Professors.

[For outline of courses see under Bacteriology and Experimental Pathology, p. 120]

III. CHEMISTRY

ROBERT ECKLES SWAIN, Professor.

FLORIAN A. CAJORI, Instructor.

16. Physiological Chemistry.—(See course 16, Department of Chemistry.)

5 units (55 hours), autumn and *summer quarters (SWAIN) MTWThF 8

1. Physiological Chemistry.—A laboratory course. Should be preceded by courses 20 and *d* (Qualitative Analysis), 22 and *g* (Quantitative Analysis), and 10 (Organic Chemistry) in the Department of Chemistry. (See Chemistry *l*.)

4 units (132 hours), autumn and *summer quarters (SWAIN, CAJORI) 5 afternoons, 1:05–4:05

(Students enrolled as Medical students will be required to deposit $15 breakage fee for course 2; other University students will pay the usual fee of $30.)

IV. HYGIENE AND PUBLIC HEALTH

WILLIAM OPHÜLS, Acting Executive.

1. Hygiene.—Three quarters required.

1 hour (11 hours), spring quarter, 3d medical year T 1–2
1 hour (22 hours), autumn and winter quarters, 4th medical year (DICKSON, OPHÜLS) F 4–5
autumn, 27; winter, 24; spring, 23; summer, 3

V. MEDICINE

ALBION WALTER HEWLETT (Executive), THOMAS ADDIS, Professors.

HARRY EVERETT ALDERSON, WILLIAM FITCH CHENEY, CHARLES MINER COOPER, HAROLD PHILLIPS HILL, WALTER FRANK SCHALLER, Clinical Professors.

ERNEST CHARLES DICKSON, HAROLD KNIEST FABER, Associate Professors.

WALTER WHITNEY BOARDMAN, JULIAN MAST WOLFSOHN, Associate Clinical Professors.

W. Edward Chamberlain, Henry George Mehrtens, Henry Herbert Yerington, Assistant Professors.

George De Forest Barnett, William Redwood Price Clark, Millicent Mary Cosgrave, Thomas George Inman, [Harry Reeves Oliver], Alfred Cummings Reed, [Ronald Beatty Tupper], Assistant Clinical Professors.

Robert Reid Newell, Harry Alphonso Wyckoff, Instructors.

Clement H. Arnold, Joseph H. Catton, Norbert J. Gottrbath, Maude Noble Haven, William Kenney, Mary H. Layman, Arthur Aloysius O'Neill, Philip Hale Pierson, Jay Marion Read, Chester Durbin Sewall, Harry Spiro, Clinical Instructors.

Wallace H. Barnes, John Graves, W. Edward Glaeser, Frank A. Kinslow, Frederic W. Kroll, Mary Jones Menzer, Harry J. Pruett, Henry T. Rooney, Hermann Schussler, Jr., Assistants.

Adelaide Brown, Lecturer on Child Hygiene.

Arthur John Ritter, Lecturer on Mental Deficiency.

Guy Stevens Farrington, Lecturer on Speech Defects.

Morton R. Gibbons, Lecturer on Medical Aspects of Insurance.

[For statement in regard to required work, see Announcement of the School of Medicine.]

Courses for Second-Year Medical Students

1. Physical Diagnosis.

4 hours (88 hours), winter and spring quarters (winter, Barnett, at Stanford University; spring, Reed, Read, in San Francisco) TTh 9:30–10:30; S 8–10
Or, 7½ hours (82 hours), autumn quarter (Reed, Read, in San Francisco) M 9:30–11; TTh 9:30–11:30; S 8–10
autumn, 9; winter, 18; spring, 16

2. Clinical Pathology.

4 hours (44 hours), autumn or spring quarter (Wyckoff) F 8:30–10:30, S 10:30–12:30
spring, 15

For Third-Year Medical Students

3. Diseases of the Thoracic Organs.

4 hours (44 hours), spring or summer quarter (Dickson) MW 9:30–11:30
autumn (2 sections), 15, 8; spring, 9

4. Diseases of the Digestive Tract.

4 hours (44 hours), autumn or spring quarter (Boardman or Sewall) MW 9:30–11:30
spring, 11; summer, 10

5. Infectious Diseases.

3½ hours (38 hours), winter quarter (Dickson) M 9:30–11, W 9:30–11:30
winter, 24

6. Diseases of the Kidneys, the Blood, and of Metabolism.

3 hours (33 hours), autumn or summer quarter (Addis, Havens) TW 8:30–9:30, S 10:30–11:30
autumn, 11; summer, 11

7. History Taking.—(Elective.)

3 hours (33 hours), any quarter (Arnold) Daily 9:30–11:30
autumn, 2; winter, 4; spring, 11; summer, 8

8. Tropical Diseases.—(Elective.)
2 hours (22 hours), spring quarter (REED) T 8:30–9:30, S 10:30–11:30
spring, 23

9. Diseases of the Endocrine Glands.—(Elective.)
1 hour (11 hours), spring quarter (ARNOLD) F 11:30–12:30
spring, 24

10. Experimental Medicine.—(Elective.)
3 hours (33 hours), autumn quarter (HEWLETT) Th 4–5, TF 4:50–5:30
autumn, 15; summer, 10

11. Physical Therapeutics.
2 hours (22 hours), spring quarter (LANGNECKER) MT 2–3
spring, 19

12. Dietetics.—Lectures and recitations. (Elective.)
2 hours (22 hours), spring quarter (ADDIS) T 3–4, Th 4–5
spring, 25

13. Practical Therapeutics and Prescription Writing.
4 hours (44 hours), winter quarter (HEWLETT) T 1:30–3, M 2:30–4, F 4–5
winter, 23

14. Roentgenography.—(Elective.)
1 hour (11 hours), winter quarter (CHAMBERLAIN) M 4–5
winter, 21; summer, 2

15. Serology.—(Elective.)
2 hours (22 hours), spring quarter (WYCKOFF) W 2:30–4:30
spring, 3

16. Clinical Bacteriology.—(Elective.)
(DICKSON) By arrangement

17. Pediatrics: Recitation.
2 hours (44 hours), autumn, winter, and summer quarters (FABER, COSGRAVE) (autumn) TTh 10:30–11:30; (winter) W 8:30–9:30; S 10:30–11:30
autumn, 16; winter, 24; summer, 10

18. Infant Feeding, and Formula Preparation.
2 hours (22 hours), any quarter (YERINGTON, COSGRAVE, LAYMAN, SLOAN)
autumn, 8; winter, 8; spring, 9 F 9:30–11:30

19. Communicable Diseases.—(Isolation Hospital.)
2 hours (22 hours), any quarter (O'NEILL) F 10–12
autumn, 8; winter, 10; summer, 2

20. Lectures on Pediatrics.—(Elective.)
1 hour (11 hours), autumn, spring, or summer quarter (O'NEILL, RITTER, FABER, and others) Th 1:30–2:30
autumn, 15; spring, 21. Interne service: autumn, 3; summer, 11

21. Neurology.
2 hours (44 hours), winter and spring quarters (INMAN) TTh 10:30–11:30
winter, 25; spring, 23

FOR FOURTH-YEAR MEDICAL STUDENTS

22. Set Clinic in Medicine.—(Lane Hospital.) (Elective.)
1 hour (11 hours), any quarter (HEWLETT, REED, DICKSON) M 11:30–12:30
autumn, 25; winter, 25; spring, 19; summer, 10

23. Set Clinic in Medical Specialties.—(Lane Hospital.) (Elective.)
1 hour (11 hours), any quarter (Faber, Yerington, Alderson, Schaller, Pierson) W 11:30–12:30
autumn, 23; winter, 25; spring, 31; summer, 9

24. Ward Work—Lane Hospital.—Students taking this course are required to take Medicine 22 also.
7 hours (77 hours), any quarter (Hewlett, Cheney, Reed, Dickson) TWTh 8:30–9:30, S 10–11:30, W 10:30–11:30, M (or Th) 9:30–11:30
autumn, 9; winter, 9; spring, 9; summer, 4

25. Ward Work and Clinics.—(San Francisco Hospital.) (One quarter is required; a second quarter may be elected.)
7 hours (77 hours), autumn, *winter, and *spring quarters (Hill)
autumn, 11; winter, 7; spring, 10 TW 9–12, F 10–11

26. Out-patient Work in Internal Medicine.—(Elective.)
4 to 6 hours (44 to 66 hours), any quarter (Arnold)
winter, 3; spring, 2; summer, 3 MTh 9:30–11:30, W 10:30–11:30, S 10–11:30

27. Out-patient Work in Tuberculosis.—(Elective.)
2 hours (22 hours), any quarter (Pierson) MTh 9:30–11:30
autumn, 2; spring, 1; summer, 2

28. Tuberculosis Clinic.—(San Francisco Hospital.) (Elective.)
1 hour (11 hours), autumn, winter, and spring quarters (Clark) F 8:30–9:30
autumn, 12; winter, 7; spring, 10

29. Neurology Clinic.—(San Francisco Hospital.) (Elective.)
2 hours (22 hours), autumn, *winter, or *spring quarter (Wolfsohn)
autumn, 11; winter, 7; spring, 10 S 10–12

30. Out-patient Work in Neurology.—Limited to two students. (Elective.)
6 hours (66 hours), any quarter (Schaller, Mehrtens)
MTh 9:30–11:30, W 10:30–11:30, S 10–11:30

31. Cutaneous Medicine.
2 hours (22 hours), autumn or *winter quarter (Alderson)
autumn, 18; winter, 11; summer, 5 M 8:30–9:30, W 9:30–10:30

32. Out-patient and Ward Work in Pediatrics and Cutaneous Medicine.
6 hours (66 hours), any quarter (Faber, Alderson, Cosgrave, Yerington)
autumn, 8; winter, 8; spring, 10; summer, 3
MTh 9:30–11:30, W 10:30–11:30, S 10–11

33. Roentgenoscopy.—(Elective.)
1 hour (11 hours), any quarter (Chamberlain) By arrangement
autumn, 2; winter, 2; spring, 2; summer, 5

34. Psychiatry.
1½ hours (50 hours), autumn, winter, and spring quarters (Mehrtens)
autumn, 29; winter, 27; spring, 24 M 1:30–3:00

35. History of Medicine.
1 hour (11 hours), winter quarter (Ophüls, Stillman, Hewlett, Spalding)
winter, 26 T 3:30–4:30

36. Jurisprudence.
1 hour (11 hours), autumn quarter F 3–4
autumn, 29

37. Military Medicine.
1 hour (11 hours), winter quarter W 3–4
winter, 26

38. Industrial Accident Insurance.—(Elective.)
1 hour (11 hours), spring quarter (M. R. GIBBONS and others) M 4–5
spring, 18

39. Life Insurance, Medical Aspects.—(Elective.)
1 hour (11 hours), autumn quarter (M. R. GIBBONS and others) T 4–5
autumn, 22

VI. OBSTETRICS AND GYNECOLOGY

ALFRED BAKER SPALDING, Professor.
GEORGE BURBANK SOMERS, Clinical Professor.
LUDWIG AUGUSTUS EMGE, Assistant Professor.
HENRY WALTER GIBBONS, FRANK ROBERT GIRARD, HENRY AUGUSTUS STEPHENSON, Assistant Clinical Professors.
CHESTER BIVEN MOORE, ALBERT VICTOR PETTIT, KARL LUDWIG SCHAUPP, Clinical Instructors.
HARRY E. CLAY, HANS VON GELDERN, PETER N. JACOBSEN, LEWIS MICHELSON, ARTHUR L. MUNGER, Assistants.
FRANCIS B. CARPENTER, WILLIAM E. STEVENS, Lecturers.

(Students before graduation must pass in at least 165 hours of Obstetrics and 100 hours of Gynecology, and must present certificates of attendance for at least 10 confinements.)

1. Obstetrics, Laboratory.
3 hours (33 hours), autumn or *summer quarter (autumn, STEPHENSON; summer, MUNGER) TF 1:30–3
autumn, 15; summer, 10

2. Obstetrics.
2 hours (22 hours), autumn or spring quarter (autumn, SPALDING; spring, STEPHENSON) TTh 8:30–9:30
autumn, 9; spring, 16

3. Obstetrics.
3 hours (33 hours), winter quarter (SPALDING) MTF 8:30–9:30
winter, 23

4. Obstetrics.
2 hours (22 hours), spring quarter (SPALDING) MF 8:30–9:30
spring, 24

5. Ward Rounds—Obstetrics.
1 hour (11 hours), any quarter (autumn, EMGE; winter, RESIDENT; spring, STEPHENSON; summer, MOORE) W 1:30–2:30
autumn, 10; winter, 10; spring, 12; summer, 8

6. Manikin Exercises.
1 hour (11 hours), autumn and winter quarters (SCHAUPP) W or F 1:30–2:30
autumn, 14; winter, 3; summer, 13

7. Women's Clinic.—(Elective.)
2 hours (22 hours), any quarter (GIRARD) TWThF 9:30–11:30
autumn, 8; winter, 8; spring, 9; summer, 8

8. Cystoscopy.—(Elective.)
1 hour (11 hours), any quarter (autumn and winter, STEVENS; spring and summer, MICHELSON) Th 9:30–10:30
winter, 3; spring, 2; summer, 3

9. Hospital Obstetrics.—(Required.)
2 weeks (56 hours), any quarter (autumn and summer, MOORE; winter, STEPHENSON; spring, MUNGER)
autumn, 8; winter, 7; spring, 8; summer, 6

10. Ward Rounds, Gynecology.—(Elective.)
1 hour (11 hours), spring and summer (RESIDENT) W 1:30–2:30
spring, 11

11. Operating Room, Lane Hospital.—(Elective.) Prerequisite: courses 2, 3, and 4.
1 hour (11 hours), any quarter (autumn, winter, spring, SPALDING; summer, EMGE) F 1:30–2:30
autumn, 17; winter, 15; spring, 13; summer, 5

12. Operating Room, San Francisco Hospital.—(Elective.) Prerequisites: courses 2, 3, and 4.
1 hour (11 hours), autumn, *winter, and *spring quarters (GIBBONS or GIRARD) S 8:30–9:30
autumn, 11; winter, 7; spring, 9

12b. Operative Gynecology.
(14 hours), winter quarter (GIBBONS)
winter, 1

13. Gynecology Laboratory.
3 hours (33 hours), spring quarter (EMGE) M 3–4, F 1:30–3
spring, 1

14. Obstetrics, San Francisco Hospital.—(Elective.)
1 hour (11 hours), autumn or summer quarter (SCHAUPP) F 11–12
autumn, 10

15. Set Clinic in Obstetrics and Gynecology.
1 hour (22 hours), any quarter (autumn, winter, spring, SPALDING; summer, EMGE) S 11:30–12:30
autumn, 33; winter, 40; spring, 39; summer, 16

16. Graduate Courses.—Work will be arranged in the Women's Clinic or in the laboratory for Obstetrics and Gynecology to meet the needs of special workers.

VII. PATHOLOGY

WILLIAM OPHÜLS, Professor.
JEAN REDMAN OLIVER, Associate Professor.

(The following courses in Pathology are required of Medical students: Pathology 1 (*b*), one quarter; Pathology 3, three quarters.)

1. General Pathology (b).—Prerequisites: Histology, Bacteriology, Pathology 1*a*.

6 hours (66 hours), autumn or spring quarter (OPHÜLS, OLIVER)
autumn, 9; spring, 16 M 8–9, TTh 1:30–4

2. General Pathology.—An optional course of weekly recitations covering the same ground as course 1.

1 hour (11 hours), autumn or spring quarter (OLIVER) By arrangement
spring, 6

3. Special Pathology.—Prerequisite: General Pathology (*a*) and (*b*).

4 hours (132 hours), any three quarters (OPHÜLS, OLIVER)
(autumn, winter, spring, summer) Th 2:30–4:30; all quarters S 8:30–10:30
autumn, 16; winter, 24; spring, 20; summer, 9

4. General Pathology (a).—A course covering the same ground as the course offered in the Department of Bacteriology and Experimental Pathology at Stanford University. (Optional.)

8 hours (88 hours), summer quarter (OLIVER) MW 8:30–9:30, 1:30–4:30

5. Clinico-Pathological Demonstrations.—For fourth-year students.

1 hour (11 hours) (OLIVER) F 11:30–12:30
winter, 7; spring, 4

6. Research Work in the Pathological Laboratory.—(By arrangement.) A deposit of $10 will be required to cover such material as is used by the student in the course of his work. (Optional.)

(OPHÜLS)

VIII. PHARMACOLOGY

‡ALBERT CORNELIUS CRAWFORD, Professor.
§PAUL J. HANZLIK, Professor.
ZENO OSTENBERG, Instructor.
§FLOYD DEEDS, Instructor.
§ELIZABETH PRESHO, Assistant.

1. Pharmacology and Materia Medica.

(*a*) 9 hours (99 hours), autumn and *spring quarters; (*b*) 5 hours (55 hours), winter quarter (CRAWFORD, OSTENBERG)
(*a*) TThF 1:30–4:30 (*b*) M 3–5, Th 3:30–5, F 2:30–4
autumn, 9; winter, 23; spring, 16

2. Pharmacy.

3 units, summer quarter (WEINBERG)
summer, 1

ANNOUNCEMENT FOR 1921–22

(The following courses are required of medical students: Courses 1, 2, and 3. All courses of the department are required of candidates for A. M. and Ph. D. degrees in pharmacology.)

‡ Deceased, March 14, 1921.
§ Beginning in 1921.

1. Chemical Pharmacology.—Didactic, 16 hours; laboratory, 32 hours; total, 48 hours; given during the first 5⅓ weeks of the quarter.

autumn (Hanzlik, DeEds) Didactic MWF 1:30–2:30; Lab. MWF 2:30–4:30

2. Experimental Pharmacodynamics.—Conferences, 20 hours; laboratory, 48 hours; total, 68 hours; given during the latter 5⅔ weeks of the quarter.

autumn (Hanzlik, DeEds) Conferences MWF 4–5; Lab. MWF 1–4

3. Systematic Pharmacology: Toxicology: Materia Medica and Therapeutics.

winter (Hanzlik) MWThF 1:30–2:30, T 3–4

4. Research in Pharmacology and Therapeutics.—In 1921–22 the course is limited to one student in pharmacology proper; thereafter, limit to be reduced depending on the organization and development of the department.

Not less than 6 hours per week. (Optional.) (Hanzlik)

IX. PHYSIOLOGY

Ernest Gale Martin, Professor.

Frank Walter Weymouth, Associate Professor.

James Rollin Slonaker, Assistant Professor.

James Percy Baumberger, George Daniel Shafer, Instructors.

[See courses 3, 4, 5, 6, and 7 in the Department of Physiology.]

X. SURGERY

Stanley Stillman (Executive), Emmet Rixford, Professors.

Albert Brown McKee, Rufus Lee Rigdon, Edward Cecil Sewall, Clinical Professors.

Frank Ellsworth Blaisdell, John Francis Cowan, Leonard Wheeler Ely, Associate Professors.

Leo Eloesser, Philip Kingsnorth Gilman, Harrington Bidwell Graham, Harvard Young McNaught, Melville E. Rumwell, Associate Clinical Professors.

Edward B. Towne, Assistant Professor.

John Adolph Bacher, Hans Barkan, James Root Dillon, Harry Leslie Langnecker, Caroline B. Palmer, Assistant Clinical Professors.

John Robert Barrows, Edmund Butler, Arthur L. Fisher, Harold Augustus Fletcher, Ross Wallace Harbaugh, Lester O. Kimberlin, Roderic O'Connor, Otis Allen Sharpe, Chester Howard Woolsey, Clinical Instructors.

Rea Ernest Ashley, Hubert W. Dudley, Louis Charles Heare, William C. Hobdy, Josiah H. Kirk, Harold Staats Moore, Merten James Price, Lorruli Anna Rethwilm, Lloyd R. Reynolds, John P. Strickler, Frederick L. Wright, Assistants.

Sterling Bunnell (Surgery), George W. Hartman (Genito-Urinary), Henry A. L. Ryfkogel (Surgery), Alfred J. Zobel (Proctology), Lecturers.

S. Nicholas Jacobs (Surgery), Assistant Lecturer.

[For statement in regard to required work, see Announcement of the School of Medicine.]

Courses for Second-Year Medical Students

1. Principles of Surgery.
4½ hours (50 hours), autumn or spring quarter (Cowan or Gilman) M 11–12:30; WF 10:30–12
autumn, 9; spring, 16

2. Fractures and Dislocations.
2 hours (22 hours), autumn or spring quarter (Blaisdell) W 8:30–10:30
autumn, 9; spring, 16

3. Surgical Anatomy.
2 hours (16 hours), autumn or spring quarter (Blaisdell) TTh 4–5
autumn, 9; spring, 16

4. Surgical Diseases of Extremities.
2 hours (22 hours), autumn or spring quarter (Rumwell, Cowan) TTh 11:30–12:30
autumn, 9; spring, 16

For Third-Year Medical Students

5. Surgical Diseases of the Abdomen.
2 hours (22 hours), autumn or spring quarter (Stillman or Cowan) M 4–5, W 4:30–5:30
autumn, 13; spring, 9

6. Surgical Diseases of Head and Neck.
2 hours (22 hours), winter quarter (Rixford) Th 4–5, W 4:30–5:30
winter, 24

7. Surgical Diseases of Thorax.
1 hour (11 hours), spring quarter (Cowan, Towne) T 4–5
spring, 24

8. Surgical Clinic, Lane Hospital.—(Two quarters required.)
1 hour (22 hours), any quarter (Cowan, Gilman, or Towne) T 11:30–12:30
autumn, 15; winter, 21; spring, 9

8a. Set Clinic, Stanford Hospital.—(Two quarters required.)
1 hour (22 hours), any quarter (Stillman, Cowan, or Gilman) Th 11:30–12:30
autumn, 15; winter, 20; spring, 12

9. Out-patient Clinic.—(Two consecutive quarters required.)
2 hours (44 hours), any quarter (Stillman or Rumwell) TTh 9:30–10:30
autumn, 15; winter, 22; spring, 9

10. Surgical Ward, Lane Hospital.—(Two consecutive quarters required.)
1 hour (22 hours), any quarter (COWAN, GILMAN) Th 8:30–9:30
autumn, 15; winter, 21; spring, 9

11. Surgical Laboratory: Tumors.
3 hours (33 hours), autumn or summer quarter (COWAN or TOWNE)
autumn, 11; summer, 10 M 1:30–3, T 3–4:30

12. Surgical Laboratory: General Surgical Pathology.—(Two quarters required.) Prerequisite: course 11.
3 hours (66 hours), two quarters (COWAN, ELY, TOWNE)
autumn, 14; winter, 21; spring, 11 ThF 2:30–4

13. Preliminary Ophthalmology.
1 hour (11 hours), autumn or spring quarter (MCKEE or BARKAN) M 3–4
autumn, 15; spring, 9

FOR FOURTH-YEAR MEDICAL STUDENTS

14. Surgical Clinic, Lane Hospital.—(Two quarters required.)
1½ hours (17 hours), any quarter (STILLMAN, COWAN, or GILMAN) S 8:30–10
autumn, 16; winter, 18; spring, 19; summer, 7. Interne service, autumn, 1

14a. Set Clinic, Stanford Hospital.—(Two quarters required.)
1 hour (22 hours), any quarter (STILLMAN, COWAN, GILMAN) Th 11:30–12:30
autumn, 16; winter, 23; spring, 20; summer, 9

14b. Set Clinic in Surgical Specialties, Stanford Hospital.
1 hour (11 hours), any quarter (MCKEE, SEWALL, ELY, RIGDON)
autumn, 17; winter, 20; spring, 18; summer, 8 T 11:30–12:30

15. Surgical Clinic, San Francisco Hospital.
4 hours (44 hours), one or more quarters (autumn, winter, RIXFORD; spring, summer, RIXFORD or ELOESSER) M 8:30–11:30, Th 11–12
autumn, 12; winter, 7; spring, 19. Interne service, S. F. H.: autumn (2 sections), 2, 7

[Three quarters selected from courses 14 and 15 are required. Two quarters may be taken at the Lane Hospital and one at the San Francisco Hospital, or vice versa, as the student may elect. Total, 110 to 121 hours.]

16. Out-patient Clinics.—(Elective.)
1 hour (11 hours), any quarter (TOWNE) W 9:30–10:30
winter, 10; spring, 14; summer, 7

17. Wards of Lane Hospital.—(Elective.)
1 hour (11 hours), any quarter (STILLMAN, COWAN, GILMAN) M 8:30–9:30
winter, 23; spring, 13; summer, 11

18. Operative Surgery on the Cadaver.—(Elective)
2 hours a week for 6 weeks (12 hours), winter or summer quarter (TOWNE)
winter, 16; summer, 7 By arrangement

19. Orthopedic Surgery.
3 hours (33 hours), autumn, winter or spring quarter (ELY, LANGNECKER)
autumn, 11; winter, 9; spring, 7. Interne service: autumn, 1 TF 10–11:30

20a. Genito-Urinary Surgery.—(Three quarters required, one quarter each at Lane Hospital and San Francisco Hospital; the third quarter at either hospital.)

1½ hours for 9 weeks (50 hours), autumn, winter, and spring quarters (Lane Hospital, RIGDON; San Francisco Hospital, DILLON and HARTMAN)
Th 8:30–10 (S. F. H.); F 8:30–10 (L. H.)
2 hours, summer quarter, clinics only, Lane Hospital (DILLON)
autumn (3 sections), 7, 7, 11; winter, 23; spring (2 sections), 12, 8; summer (2 sections), 4, 3. Interne service: autumn, 7

20b. Genito-Urinary Surgery.—(Optional.)

1 hour (11 hours), winter or spring quarter, lectures only (DILLON) M 4–5
2 hours (22 hours), summer quarter, clinics only, Lane Hospital (DILLON, WOOLSEY)
autumn, 26; winter, 23

21. Ophthalmology.—(Three quarters required.)

2 hours (22 hours), autumn, winter, and spring quarters; 2 hours, summer quarter, clinics only (MCKEE, BARKAN)
Lec. T 1:30–2:15, Clinic TTh 2:15–3:30
autumn, 27; winter, 24; spring, 26; summer, 4

22. Otology, Rhinology, and Laryngology.—(Three quarters required.)

1 hour (33 hours), autumn, winter, and spring quarters (SEWALL)
autumn, 28; spring, 22. Interne service: autumn, 2 Lec. Th 1:30–2:30

In addition, 33 hours of clinic work, autumn, winter, and spring quarters (MCNAUGHT, BACHER, KIRK) T or Th 2:30–3:30; 2 hours a week for 11 weeks, out-patient clinic; summer quarter
3 hours (33 hours), clinic, S. F. Hospital, spring quarter (GRAHAM)
autumn, 28; winter (2 sections), 24, 23; summer, 4 By arrangement

23. Special Courses.—For advanced students and physicians. (*a*) Ear, Nose, and Throat; (*b*) Surgical Pathology; (*c*) Anesthetics.
(c) summer, 24

PRE-NURSING CURRICULUM

The Pre-Nursing Curriculum is designed primarily for those who wish to prepare themselves for administrative, teaching, social service, or public health work. The curriculum consists of three years' work at Stanford University and two years at the Stanford School of Nursing, Lane Hospital, San Francisco, the degrees of Bachelor of Arts and Graduate Nurse being conferred at the close of the five years. The completion of 135 units of University work and acquirement of 135 grade points are necessary before the student may enter the School of Nursing.

FIRST SIX QUARTERS

English, Foreign Languages, History, Problems of Citizenship (Lower Division requirements).

Chemistry 1, 3, 10, *a*, *b*: 18 units.

General Biology: 9 units (Zoology 1 may be substituted for General Biology.)

Zoology 11 (Comparative Anatomy): 5 units.

SEVENTH, EIGHTH, AND NINTH QUARTERS

Anatomy (special course): 5 units.

Bacteriology A: 6 units.

Physiology 1, 2: 10 units.

Zoology 13: 5 units.

Graduates of schools of nursing affiliated with an institution of collegiate rank may be granted, on recommendation of the Pre-Nursing Committee, a maximum advanced credit of forty-five units, provided they have also fulfilled the requirements of graduation and recommendation from an accredited high school.

Graduates of accredited schools of nursing not affiliated with an institution of collegiate rank should have, in addition to the high school requirements, one year of successful administrative or educational experience.

For students entering with advanced standing a minimum of 45 units of resident work at Stanford University will be required. While this minimum of 45 units usually presupposes a residence of three University quarters, the completion of the collegiate part of the Pre-Nursing Course in this minimum of time is possible only for those students who have fulfilled the requirements of the first six quarters. (including the Lower Division requirements.)

Students intending to take this work should confer with Professor C. S. Stoltenberg, Stanford University, or with the Superintendent of Nurses, Lane Hospital, San Francisco. Prospective students are urged to take their probationary period as nurses (three months) early in the course, while they are still at the University. This work can be arranged for during the summer quarter.

MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.
Warren D. Allen, Organist.

Services

Daily Chapel, with address, 7:50 a.m.
Sunday, Divine Worship and Sermon, 11 a.m. (Holy Communion as announced.)

Organ Recitals

Sunday, 4 p.m.; Tuesday, 4:15 p.m.; Thursday, 4:15 p.m.

MILITARY TRAINING

LEROY P. COLLINS, Major Field Artillery, Professor.
RICHARD H. POWER, Major Veterinary Corps, CHARLES E. BOYLE, Captain Field Artillery, HAROLD A. COONEY, Captain Field Artillery, Assistant Professors.

A field artillery unit of the Reserve Officers' Training Corps is maintained for the purpose of fitting students to become reserve field artillery officers while they are taking their regular college courses, thus enabling them, if called into active service during a national emergency, to best perform the military duties for which their capabilities and training as college graduates fit them in the service of their country.

The course is planned to cover a period of four academic years. Any student electing the course is expected to do so with the idea that he will complete the first two years' basic course, and, if possible, that he will elect and complete the last two years' advanced course; and that, upon its satisfactory completion, and upon being awarded a degree by the University, he will accept from the President of the United States, a commission as second lieutenant of Field Artillery in the Officers' Reserve Corps. If the college course is completed in three years, the commission may be awarded at that time. The obligation to complete the basic course may be cancelled for good and sufficient reasons approved by the head of the department and the President of the University. The advanced course is open only to such students as satisfactorily complete the basic course, and they are required to attend one summer instruction camp of six weeks' duration, normally at the end of the first year of the advanced course. Credit is given for R.O.T.C. work taken at other institutions.

All students enrolled in the R.O T.C. are furnished uniforms and equipment without cost to themselves. If they desire, they may attend the summer instruction camp at Camp Knox, Ky., without any cost on their part, as the government furnishes them with food, clothing, and mileage at the rate of five cents per mile to and from camp. The camp is a period of interesting and instructive work with the physical and moral development of the students well provided for, and, in addition, is valuable in its broadening effect on the student, who is associating with men from a score of other leading American universities. Men taking the advanced course receive in addition to the above, commutation of subsistence at the rate of $12 per month for two years and pay while at the required camp. After being commissioned, those who so desire may serve with the regular army as second lieutenants for a period of six months. All others are placed in the inactive reserve.

The United States Government places at the disposal of the University for instruction purposes the necessary number of horses, horse equipment, personal equipment, a 3-inch battery, one gun of each of the other types used by field artillery, fire control and reconnaissance instruments, motor equipment including caterpillar tractors, trucks, and motorcycles.

Field Artillery Course

first year basic (freshman)

1a. Fundamentals of Military Science.—(3 hours per week.) Organization and administration of a battery; military hygiene; first aid and sanitation; customs of the service; military courtesy and discipline; morale; psychology of handling men and leadership; guard duty.

3 units, autumn quarter (Power)
spring, 50

1d. Practical Instruction.—(3 hours per week.) Standing gun drill, gunners' instruction, school of the soldier, squad and battery dismounted.

1 unit, autumn quarter (Collins)
autumn (2 sections), 24, 10

[Note.—This course, with the other practical courses of the basic course, viz., 1*e*, 1*f*, 2*d*, 2*e*, and 2*f*, fulfills the college requirement of six quarters military or physical training.]

1b. Materiel.—(3 hours per week.) Guns: types, construction, mechanical principles, principles of design. Field artillery carriages: design, construction, tools, accessories, equipment, methods of carrying same; disassembling and assembling various parts of gun material: their care, operation, nomenclature, maintenance, lubrication, cleaning; sights, quadrants, fuze-setters, fire control instruments: principle of design, nomenclature, operation, adjustments, care; ammunition: powders, explosives, detonators, primers, projectiles, fuzes: their description, manufacture, construction, care, and use.

3 units, winter quarter (Cooney)
autumn, 68

1e. Practical Instruction.—(3 hours per week.) Elementary equitation. Saddling and bridling, adjustments, acquiring a firm seat at all gaits.

1 unit, winter quarter
winter, 67

1c. Gunnery.—(3 hours per week.) Elements of field artillery gunnery; duties of the cannoneer; care and maintenance of harness and horse equipment; gunners' examination. Students qualifying as expert first-class gunners, first-class gunners, and second-class gunners, are

entitled to wear the insignia for same for the remainder of the course.
3 units, spring quarter

1f. Practical Instruction.—(3 hours per week.) Driving and draft. Management of a pair in battery drills and maneuvers.
1 unit, spring quarter
spring, 108

SECOND-YEAR BASIC (SOPHOMORE)

2a. Horses and Stable Management.—(3 hours per week.) The horse: care, conditioning and training; care and management in the field; forage and animal nutrition; types of artillery horses; breeds and blood lines; shoeing, grooming, stable management and exercise; hippology: anatomy, physiology, points, conformation, and age of the horse; wounds, simple diseases and their treatment; veterinary medicines; entraining and detraining, care en route.
3 units, autumn quarter (POWER)
winter, 51

2d. Practical Instruction.—(3 hours per week.) Advanced equitation and horse training; use of the aids; training and conditioning of the officer's charger.
1 unit, autumn quarter
autumn, 3; winter, 32

2b. Motors and Motor Transportation.—(3 hours per week.) Gas engines, motor vehicles, artillery trucks and tractors, theory, mechanical design, construction, operation, nomenclature, care, maintenance, etc.
3 units, winter quarter (COLLINS)
autumn, 26

2e. Practical Instruction.—(3 hours per week.) *a.* Driving, care and use of motor vehicles. *b.* Cannoneer's instruction and fire discipline. *c.* Pistol, automatic rifle, and machine gun practice.
1 unit, winter quarter

2c. Topography and Communications.—(3 hours per week.)
a. Topography.—Military maps and mapping: theory, practice, reading, conventional signs, distances, direction, scales, elevation, contours, ground forms, road sketches, and road repairs; position, panoramic, and place sketches.
b. Communications.—Means of transmitting information; theory of telephones; the camp telephone; troubles and tests; the monocord switchboard; line installation and maintenance; artillery net.
3 units, spring quarter (BOYLE)
autumn, 27; spring (2 sections), 5, 54

2f. Practical Instruction.—(3 hours per week.) Battery drills and maneuvers mounted. The corporals are selected from this class.
1 unit, spring quarter

FIRST-YEAR ADVANCED (JUNIOR)

3a. Gunnery.—(3 hours per week.) Ballistics, pressures, and velocities; the trajectory and its elements, trajectory problems; accuracy of fire; time fire: manipulation of the point of burst, the shrapnel cone; percussion fire: angle of incidence, remaining velocity, ground conditions.

3 units, autumn quarter

3d. Practical Instruction.—(3 hours per week.) Composition and use of battery, battalion and regimental special details; reconnaissance, selection and occupation of battery positions; training of scouts and agents; communications in open and in stabilized warfare, laying out the telephone net; battery emplacements; camouflage.

1 unit, autumn quarter
winter, 22

3b. Firing.—(3 hours per week.) Commands, methods of fire, methods of laying; determination of firing data, principles of fire; conduct and observation of fire: terrain board, blackboard, sand table and smoke bomb firing (Part IX, F. A. D. and S. R.); percussion precision firing and practical use of range tables (artillery firing); lateral observation.

3 units, winter quarter (BOYLE)
autumn, 13

3e. Practical Instruction.—(3 hours per week.) Conduct of fire with blackboard, terrain boards, smoke bomb, and subcaliber practice.

1 unit, winter quarter

3c. Orientation.—(3 hours per week.) Methods, intersection, resection, and traverse; projections; Lambert system of grids; coördinates; control sheets; azimuths; orienting line; laying guns on base line; laying guns with a declinated instrument; visibility; dead space; position chart.

3 units, spring quarter

3f. Practical Instruction.—(3 hours per week.) Battery drills and maneuvers, mounted. The sergeants are selected from this class.

1 unit, spring quarter

SECOND YEAR ADVANCED (SENIOR)

4a. Military History and Policy of the United States.—(3 hours per week.) A critical study of our military policy, and a military survey of the most important campaigns and battles of the United States.

3 units, autumn quarter

4d. Practical Instruction.—(3 hours per week.) Acting as assistant instructors for first-year students in course 1*d*.

1 unit, autumn quarter

4b. Military Law.—(3 hours per week.) History, authority, sources; procedure of court-martials; rules of land warfare; military government; armistices, conventions, treaties; civil government.

3 units, winter quarter

4e. Practical Instruction.—(3 hours per week.) Training as instructors in equitation.

1 unit, winter quarter

4c. Organization and Tactics.—(3 hours per week.) Fundamentals of the organization and tactics of the army and its various arms and elements; field artillery organization, tactics, operations, employment, information, ammunition supply, functions of various calibres of field artillery and principals involving the type used; divisional, corps and army artillery and functions of each; staff organizations, functions and duties; Field Service Regulations, field orders, logistios; tactical rides and map maneuvers.

3 units, spring quarter
1920–21 (COLLINS) *autumn, 1; winter 1*

4f. Practical Instruction.—(3 hours per week.) Battery drills and maneuvers, mounted. The cadet officers are selected from this class.

1 unit, spring quarter

4p. Polo.—(3 hours per week.) Open to all students who have completed 1*e*, or 2*d*.

1 unit, autumn, winter, and spring quarters
autumn, 15; winter, 14; spring, 17

INFANTRY

1. Advanced Theory.

2 units, autumn quarter (BINGHAM, COLLINS)
autumn, 14; winter, 5

2. Advanced Practice.

1 unit, autumn quarter (BINGHAM, COLLINS)
autumn, 5; spring, 1

3. Basic: Theory.

2 units, autumn quarter (BINGHAM)
autumn, 5

4. Basic: Practice and Theory.

1 unit, autumn quarter (BINGHAM)

5. Basic: Practice.

1 unit, autumn quarter (BINGHAM)
autumn, 1

MINING AND METALLURGY

THEODORE JESSE HOOVER, JAMES MACDONALD HYDE, Professors.
WILTON JOSEPH CROOK, WALDEMAR FENN DIETRICH, JOHN ELBERT ELLIOTT, FREDERICK GEORGE TICKELL, Associate Professors.

Louis David Mills, William Hillman Shockley, Lecturers.

The Department of Mining and Metallurgy is a graduate school, offering professional training in mining and metallurgy, and leading, on the completion of a two years' graduate course, to the degree of Engineer. Candidates for registration in the department will present as qualification for admission the degree of A.B. from the University, or its equivalent.

Students are advised to register for the four years of the pre-Mining course in the Department of Geology, in which department the courses are arranged, in coördination with the Department of Mining and Metallurgy, to lead up to the professional school. Students may, however, carry out their pre-Mining work in the Department of Chemistry, Physics, Civil Engineering, or Mechanical Engineering, with the advice and consent of the faculties of those departments and the faculty of this department.

Lecture Courses

economics of mining

1. History of Mining and Metals.—A general survey of the metal supply of peoples and its effect on their progress in the arts, science and culture; relation of mining and metallurgy to other industries, and to civilization. Open to students of all departments.

1 unit, winter quarter (Hoover) T 9
winter, 83

2. Mine Valuation.—General considerations; sampling and measurement; widths and volumes; economic geology; analysis of costs; prices of metals; smelter contracts; amortization and depreciation; reserves; reports. Prerequisites: courses 5 and 12 or 25.

1 unit, autumn quarter (Hoover) Th 9
autumn, 11

3. Mine Organization.—The mining company; forms of business; frauds; selling mines; shares; balance sheet; profits; valuation; taxes; law. Prerequisites: courses 5 and 12 or 25.

1 unit, winter quarter (Hoover) Th 9
winter, 10

4. Mine Management.—Organization and discipline of staff; technical committees, consulting engineers, managing directors, general managers; business principles and scientific management; vocational and technical training; personal qualities and efficiency; organization and discipline of labor; reports; supplies and material; costs and accounts. Prerequisites: courses 5 and 12 or 25.

1 unit, spring quarter (Hoover) Th 9
spring, 15

MINING

5. Principles of Mining.—Covers the whole subject, gives a comprehensive view of the industry, and serves as an outline for the orderly development of professional studies; prospecting; development; equipment, operation. Prerequisites: For undergraduates who have had Geology 1, Mineralogy 1.

4 units, autumn and spring quarters (DIETRICH) MTWTh(F) 11
autumn, 44; spring, 35

6. Mine Rescue and First Aid.—In coöperation with the U. S. Bureau of Mines. Open to undergraduates.

1 unit, winter quarter (DIETRICH) By arrangement

7. Prospecting and Development.—The prospector; geological aspects; placer prospecting methods and costs; prospecting deposits in place, methods and costs; engineering features. Boring methods are covered in detail. Development plans; methods and costs of shaft sinking, drifting, and raising; engineering records. Prerequisites: Mining 5; Civil Engineering 20; Geology 1, 4, 5; Economic Geology 2.

3 or 5 units, autumn quarter (DIETRICH) TThS 8; Lab. by arrangement
autumn, 15

8. Surface Equipment.—Factors governing choice of surface equipment. Power, compressors, explosives, drills, roads, railroads, tramways, materials for structures, bins. Prerequisites: Mining 7; Electrical Engineering 2, 3; Mechanical Engineering 32.

2 units, winter quarter (DIETRICH) TTh 11

9. Underground Equipment.—Factors governing choice of underground equipment. Power, hoisting, haulage, drainage and pumping, ventilation, illumination. Prerequisite: course 8.

3 units, spring quarter (DIETRICH) MWF 11

10. Surface Operations.—Factors governing choice of methods of mining: Placer, hydraulic, dredge, pit, quarry, costs. Prerequisite: course 7.

2 units, winter quarter (DIETRICH) TTh 8
winter, 6

11. Underground Operations.—Factors governing choice of method. Methods of timbering, filling, disposal of waste, stoping, costs, duty per man. Prerequisite: course 10.

3 units, spring quarter (DIETRICH) MWF 8
spring, 6

METALLURGY

12. Principles of Metallurgy.—Elementary discussion of broad principles of ore dressing and metallurgical operations. Preparatory to more detailed treatment in later courses; crushing, classification, concentration, hydrometallurgy, pyrometallurgy. Prerequisite: Chemistry 1, *a*, *d*; Mineralogy 1; Economic Geology 2.

5 units, winter quarter (HYDE) MTWThF 11
winter, 21

13. Crushing, Sizing, and Classification of Ores.—Mechanical preparation of ores for concentration or hydrometallurgical treatment. Principles, practice, and cost of crushing, pulverizing, sizing, and hydraulic classification of ores, transportation of pulp throughout the plant and thickening of pulps. Prerequisites: Metallurgy 12; Electrical Engineering 2.

2 units, autumn quarter (HYDE) By arrangement
autumn, 5

14. Concentration Processes.—The principles, practice, and cost of the concentration of metalliferous minerals from ores. Prerequisite: Metallurgy 13.

2 units, winter quarter (HYDE) By arrangement
winter, 4

15. Hydrometallurgy, Gold and Silver.—The principles, practice, and cost of treating ores by amalgamation, cyanidation, chlorination, lixiviation methods. Prerequisite: Metallurgy 14.

3 units, autumn quarter (HYDE, MILLS) By arrangement
autumn, 1

16. Hydrometallurgy, Copper, Lead, and Zinc.—The principles, practice, and cost of recovering copper, lead, and zinc from ores by hydrometallurgical processes. Prerequisite: Metallurgy 14.

3 units, spring quarter (HYDE) By arrangement
spring, 4

17. Pyrometallurgy, Iron and Steel.—The principles, practice, and cost of producing iron and steel. Prerequisite: Metallurgy 12.

3 units, autumn quarter (———) MWF 8
autumn, 129

18. Pyrometallurgy, Copper, Lead, and Zinc.—The principles, practice, and cost of recovering copper, lead, and zinc from ores by pyrometallurgical methods; the physical chemistry of metallurgical operations. Prerequisite: Metallurgy 14.

3 units, spring quarter (DIETRICH) By arrangement
spring, 3

19. Pyrometallurgy, Nickel, Aluminum, Etc.—The principles, practice, and cost of producing the minor metals. Prerequisite: Metallurgy 14.

3 units, spring quarter (CROOK) By arrangement

20. Electrometallurgy.—The principles, practice, and cost of electric furnace work. Prerequisite: Metallurgy 13.

2 units, winter quarter (CROOK) By arrangement

21. Metallography.—The physical, chemical, and mechanical properties of metals and alloys; microscopic work. Prerequisite: Metallurgy 12.

1 unit, autumn quarter (CROOK) By arrangement

22. Pyrometry.—Determination of high temperatures and the calibration of pyrometrical instruments.

1 unit, autumn quarter (CROOK) By arrangement

23. Metallurgical Calculations.—Prerequisite: Metallurgy 22.

2 units, spring quarter (CROOK) By arrangement

24. Assaying.—Principles and methods for determining gold and silver in ores and metallurgical products. Prerequisites: Open to undergraduates who have had Chemistry 1, 3, *a*, *f*, and Mineralogy 1. To accompany course 47.

1 unit, autumn and spring quarters (HYDE) By arrangement
autumn, 4; spring, 8

PETROLEUM

25. Principles of Petroleum Mining.—(Same as Economic Geology 4*a* and 4*b*.) Covers the whole subject of petroleum mining, gives the student a comprehensive view of the industry and serves as an outline for the orderly development of professional studies; development, equipment, production, utilization. Prerequisites: Open to undergraduates who have had Geology 1; Paleontology 2, 3.

5 units, winter and spring quarters (ELLIOTT) MTWThF 8
winter, 59; spring, 38

26. Petroleum Geology.—A course in the selection of prospective oil land, the making of geologic examinations and reports, and the application of geology in the development of oil fields and the production of oil. Prerequisite: Mining 25.

3 units (TICKELL) By arrangement

27. Oil Field Development.—Dealing with the equipment and methods used in drilling oil wells. Prerequisite: Mining 25.

2 units (TICKELL) By arrangement

28. Production of Oil.—Lectures on problems connected with the production of oil. Prerequisite: Mining 27.

2 units (TICKELL) By arrangement

29. Storage and Transportation of Petroleum.—A course of lectures that include the methods of preventing loss during storage. Prerequisite: Mining 28.

2 units (TICKELL) By arrangement

30. Petroleum Refining and Utilization.—Refined products and the utilization of products. Prerequisite: Mining 29.

2 units (TICKELL) By arrangement

31. Oil Land Valuation.—A course dealing with the factors in oil land valuation, with actual problems. Prerequisite: Mining 30.

2 units (TICKELL) By arrangement

Laboratory Courses

ECONOMICS OF MINING

32. Valuation, Organization, Management.—Analysis of data and elaboration of schemes of operation.

1 unit, autumn, winter, and spring quarters (Hoover) By arrangement

MINING

33. Equipment Plans.—In connection with Mining 8 and 9. Drawing plans and specifications and preparing cost estimates for mine equipment.

2 or 3 units, spring quarter (Dietrich) By arrangement

34. Mining Machinery.—In connection with Mining 8 and 9. Problems and experimental work on mining machinery.

2 units, winter quarter (Dietrich, Shockley) By arrangement

35. Mine Operations.—In connection with Mining 10 and 11. Choice and planning of mining methods to suit given conditions. Considerable experience in the field is a desirable prerequisite.

2 or 3 units, winter and spring quarters (Dietrich) By arrangement
winter, 3; spring, 5

36. Mining Research and Thesis.—Unsolved problems in mining practice.

4 units, autumn, winter, and spring quarters (Hoover, Dietrich) By arrangement

METALLURGY

37. Ore Dressing.—Mechanical testing by laboratory methods to determine best method of ore dressing. Designed to accompany metallurgy 14. Prerequisites: courses 12 and 13.

2 units, winter quarter (Hyde) By arrangement
winter, 4

38. Hydrometallurgy.—Laboratory study of hydrometallurgical methods; to accompany courses 15 and 16.

2 units, spring quarter (Hyde) By arrangement
spring, 1

39. Metallurgical Machinery.—Design of an ore treatment plant. Prerequisites: courses 38 or 39.

2 units (Hyde) By arrangement

40. Pyrometallurgy.—Pyrometry; refractory materials, formation of slags, mattes, and metals. To accompany courses 17, 18, 19.

2 units, autumn quarter (Hyde, Crook) By arrangement

41. Electrometallurgy.—Treatment of zinc and copper ores in electric furnace, and a study of products. To follow or accompany course 20.

2 units (———)

42. Metallography.—Laboratory study of physical, chemical, and mechanical properties of metals and alloys; to accompany course 19.

2 units, spring quarter (Hyde) By arrangement
spring, 1

43. Pyrometry.—Study of temperatures, measurements.

2 units, autumn quarter (Crook) By arrangement

44. Metallurgical Analysis.—Rapid methods for quantitative determination of constituents of ores and metallurgical by-products; to accompany Metallurgy 35, 36, 37. May be taken concurrently with course 35. Prerequisite: Chemistry *f*, Mining and Metallurgy 12.

3 or 4 units, winter and spring quarters (Dietrich) By arrangement
winter, 4; spring, 4

45. Metallurgical Analysis.—Rapid methods for quantitative determination of constituents of metals and alloys.

3 units, winter quarter (Crook) By arrangement

46. Metallurgical Research and Thesis.—Original study of some unsolved problems in metallurgical practice.

4 units, winter and spring quarters (Hyde, Hoover) By arrangement
winter, 3; spring, 4

47. Assaying.—Determination of gold and silver in ores and metallurgical products. Prerequisites: Chemistry 1, 3, *a*, *f*; Mineralogy 1. To accompany course 23.

4 units, spring quarter (Hyde) MTWThF 1:05

PETROLEUM

48. Advanced Work in Petroleum Engineering.—Special work in courses 26 to 30.

2 to 5 units (Tickell) By arrangement

49. Petroleum Research and Thesis.—Unsolved problem in petroleum engineering.

5 units, autumn, winter, and spring quarters (Hoover, Tickell)
autumn, 3; winter, 1 By arrangement

[**50. Seminar in Origin and Accumulation of Oil.**—(Same as Economic Geology 5.)

4 units, winter quarter (Tolman) By arrangement]

PRE-MINING SCHEDULE

(The following schedule has been designed for Pre-Mining students, and they will be expected to follow it except for very good reason to the contrary.)

FRESHMAN YEAR

Autumn Quarter

Applied Mathematics 1*a*	Elementary Analysis	MTWThF	9:00	5
Chemistry 1	General Inorganic	MWF	8:00	3
Language			11:00	3
Economics 1	Citizenship 1: Soc. Prob.	MTWTh	10:00	4
				15

Winter Quarter

Applied Mathematics 1*b*	Elementary Analysis	MTWThF	9:00	5
Chemistry 3	General Inorganic	MWF	8:00	3
Language			11:00	3
Economics 2	Citizenship 2: Econ. Prob.	MTWTh	10:00	4
				15

Spring Quarter

Applied Mathematics 2*a*	Calculus	MTWThF	9:00	5
Chemistry *b*	General Inorganic	MTW	1:05	3
Language			11:00	3
Political Science 1	Citizenship 3: Pol. Prob.	MTWTh	10:00	4
				15

SOPHOMORE YEAR

Autumn Quarter

Applied Mathematics 2*b*	Calculus	MTWThF	10:00	5
Engineering 1	Linear Drawing	W 1:05 or S	9:00	1
English 2	Composition	MWF	8:00	3
History			9:00	3
Physics 3*a*	Mechanics	TTh 11, WThF	1:05	4
				16

Winter Quarter

Engineering 2	Lettering	W 1:05 or S	9:00	1
Engineering 3	Descriptive Geometry	Th 8 or 10, MT	1:05	3
Geology-Paleontology 2	Historical Geology	MWF	10:00	4
History			9:00	3
Physics 3*b*	Heat and Light	TTh 11, WThF	1:05	4–5
				15–16

Spring Quarter

English 2	Composition	MWF	8:00	3
Geology-Paleontology 3	Historical Geology	MWF	10:00	4
History			9:00	3
Physics 3*c*	Electricity	TTh 11, WThF	1:05	4–5
				14–15

JUNIOR YEAR

Autumn Quarter

Geology 1	Dynamical Geology	MTWThF	9:00	5
Geology-Mineralogy 1	Common Rocks and Minerals	MW 10, MW	1:05	4
} Mining and Metallurgy 18	Pyromet. of Iron and Steel	MWF	8:00 }	3
} *or* Mech. Engineering 21	Valuation of Fuels and Oils	F 8, Lab	1:05 }	
Civil Engineering 20	Surveying	T 11, MT	1:05	3
				15

Winter Quarter

Applied Mathematics 3*a*	Theoretical Mechanics	MTWThF	10:00	5
Economics 3	Accounting	MWF	9:00	3
Geology-Mineralogy 2	Crystallography	WF 11, WF	1:05	4
Geology-Econ. Geol. 1	Non-metals	MTWTh	8:00	4
				16

Spring Quarter

Applied Mathematics 3*b*	Theoretical Mechanics	MTWThF	10:00	5
Mech. Engineering 1	Forge	S 9, Lab	1:05	4
Mech. Engineering 12	Machine Drawing	dr	1:05	2–3
Geology-Econ. Geol. 2	Ores	MTWTh	8:00	4
				15–16

Summer Quarter

Geology	Field	8
Geology	Topographic	7
		15

SENIOR YEAR

Autumn Quarter

Chemistry 20 } Chemistry *d* }	Qualitative Analysis	dr	1:05	6
Engineering 10	Applied Mechanics	MWF 9, MT	1:05	5
Mining and Metallurgy 5	Principles of Mining	MTWThF	11:00	5
				15

Winter Quarter

Chemistry 21 } Chemistry *f* }	Quantitative Analysis	dr	1:05	6
Economics 20	Corp. and Trust Finance	MTWTh	10:00	4
Mining and Metallurgy 1	History of Mining			1
Mining and Metallurgy 12	Principles of Metallurgy	MTWThF	11:00	
				16

Spring Quarter

Economics 10	Accounting of Investments	MTWTh	11:00	3–5
or Engineering 12	Hydraulics	MWF 9, MT	1:05	
or Geology-Mineralogy 3	Systematic Mineralogy	Th 10, TTh	1:05	
Mining and Metallurgy 24	Prin. of Petroleum Mining	MTWThF		5
Mining and Metallurgy 23 } Mining and Metallurgy 43 }	Assaying	MTWTh	11:00	4
				13–15

Total—Minimum	195
Maximum	200

MUSIC

WARREN D. ALLEN, Organist, Directory of the University Choir and Orchestra.

ERNEST WHITNEY MARTIN, Director of the Military Band.

Choir 1.—The choir sings at the morning service each Sunday in Memorial Church, the music consisting of anthem, chant, and hymns. Continuous course until end of the year.

1 unit per quarter (ALLEN) Rehearsal Th 7:35
autumn, 52; winter, 49; spring, 59; summer, 32

Choir 2.—A separate choir, formed for the performance of oratorio and other major choral works.

1 unit (ALLEN) Rehearsal Th 8:20
winter, 43; spring, 61

3. Orchestra.

1 unit per quarter (ALLEN) Rehearsal W 7:30
autumn, 21; winter, 18; spring, 14

4. Military Band.

1 unit per quarter (MARTIN)
autumn, 40; winter, 35; spring, 34

PHILOSOPHY

HENRY WALDGRAVE STUART, Professor.
HERBERT LESLIE STEWART, Acting Professor (Summer Quarter).
HAROLD CHAPMAN BROWN, Associate Professor.

The requirements for the Bachelor's Degree in this department constitute an adequate preparation for advanced studies in Philosophy and leave opportunity for all the usual elements of a general or liberal education. Major students are required to complete 35 units in Philosophy (in which courses 1, 2, 3, 6, and 10 must be included), and also, preferably during the first two years in the University, course 1 in Psychology, the general courses in medieval and modern European history (15 units), and the second-year courses (15 units) in French or German. Each major student will be expected to take a sufficient number of advanced and special courses in at least one minor subject to give a substantial knowledge of some one of its divisions or aspects.

1. Logic.—The principles of Deductive and Inductive Logic, with special attention to the important types of fallacy. Open to all students.

5 units, autumn quarter (STUART) MTWThF 9
5 units, summer quarter (STUART) MTWThF 8
autumn, 69; summer, 86

2a. Ethics.—A short survey of the morality of primitive peoples as compared with more developed forms of morality. The working principles of good conduct. The important historic theories as to the criterion for good conduct. Prerequisite: second-year standing.

5 units, autumn quarter (STUART) MTWThF 10
autumn, 33

2b. Ethical Principles and Practical Life.—A comparative study of selections from Plato, Aristotle, the Stoics, the New Testament Gospels, Herbert Spencer, Matthew Arnold, Nietzsche, and Tolstoy. The contemporary historical conditions of various sorts which had influence in forming each type of ethical teaching and the practical tendencies of each type when applied in actual behavior. Prerequisite: course 2 or an approved equivalent.

5 units (STUART) [Not given in 1920–21]

3. History of Philosophy.—The development of philosophical theories from the early Greek period to the end of the eighteenth century, with a brief outline of philosophical movements in the nineteenth century. Attention will be given throughout to the relations of philosophy with social and political conditions and with science, literature, and religion.

Prerequisite: third-year standing and one elementary course. Either quarter may be taken without the other.

4 units, autumn and winter quarters (BROWN) MTThF 9
autumn, 73; winter, 60

4. Modern Scientific Conceptions of Nature and Mind.—A study of current views of cosmic structure and the place of man and his activities in nature, in the light of recent developments in physical chemistry, evolutionary biology, and psychology. Prerequisite: second-year standing.

4 units (BROWN) [Not given in 1920–21]

5. Esthetics.—The origins and nature of art. Its significance for religion, morality, and social life. The rise of art forms. Contemporary theories of esthetics. Prerequisite: second-year standing.

5 units, spring quarter (BROWN) MTWThF 9
spring, 70

6. Philosophy of the Nineteenth Century.—The development of philosophical problems in France, Great Britain, Germany, and America will be studied in successive years in relation to the particular national genius and the conditions under which they arose. Prerequisite: course 3, or special permission of the instructor for suitably qualified third- or fourth-year students. The subject for the Spring Quarter was French philosophy; for the Summer Quarter, British and German.

4 units, spring quarter (BROWN) MTThF 9
4 units, summer quarter (Course 6a, H. L. STEWART) TWThF 9
spring, 25; summer, 6

6b. Philosophical Ideas in Contemporary Literature.—The principal writers considered were Tolstoy, Ibsen, H. G. Wells, Wilfrid Ward, Frederick Harrison, Lord Morley, Mrs. Humphry Ward, Rabindranath Tagore, Thomas Hardy, George Meredith, and Anatole France.

4 units, summer quarter (H. L. STEWART) TWThF 10
summer, 39

7a. Inductive Logic.—Methods of investigation in use in the natural and social sciences, and the cardinal assumptions and principles on which these methods are based. The course closes with a brief introduction to the field of general philosophy. Prerequisite: course 1 or an approved equivalent.

4 units (STUART) [Not given in 1920–21]

7b. Introduction to Philosophy.—The aims and uses of philosophical study and the relation of philosophy to other subjects. How the problems of general philosophy (theory of knowledge and metaphysics) arise in the ordinary course of our experience. A review of the more important answers which have been proposed for these problems. Prerequisite: one elementary course.

4 units, winter quarter (STUART) TWThF 8
winter, 30

8. The Social Order and the Individual.—Insect and animal "societies" and the types of human social organization. Social authority and individual initiative. The ethical basis of political obligation. The nature of democracy, aristocracy ,and absolutism.

4 units (STUART) [Not given in 1920–21]

9. Religion.—The psychological and social origins of religion. The relations of religion to science, to morality, and to philosophy. The distinctive content and characteristics of the great religions. Prerequisite: course 2, 3, or 4, or an approved equivalent.

4 units (STUART) [Not given in 1920–21]

10. The Problems of Contemporary Philosophy.—A constructive discussion of the main problems of general philosophy as presented in recent literature. Pluralism and monism; empiricism, absolutism and pragmatism; realism and idealism. Prerequisite: courses 3 and 6 or an approved equivalent.

4 units, winter quarter (BROWN) MTThF 10
4 units, summer quarter (STUART) TWThF 11
winter, 16; summer, 8

11. Seminary.

(a) Development of Political Philosophy.
autumn quarter (BROWN)

(b) Topics in Ethical Theory.
winter quarter (STUART)

(c) Philosophical Aspects of Evolution.
spring quarter (BROWN)
autumn, 11; winter, 5; spring, 16

PHYSICAL EDUCATION

MEN

ALFRED DAVID BROWNE, Associate Professor and Medical Adviser.

ENCINA GYMNASIUM

WALTER D. POWELL, Acting Director of the Department and Director of Major Intercollegiate Athletics.

HENRY WILFRED MALONEY, Director of Minor Sports and Associate Director of the Department.

ERNST BRANDSTEN, Director of Aquatics and Assistant Director of the Department.

WELLFORD DUFFY SEAY, Associate Director of Major Intercollegiate Athletics.

CHARLES SELWYN BOTSFORD, Director of Intramural Athletics.
ROBERT LYMAN TEMPLETON, Assistant Director of Major Intercollegiate Athletics.

The organization of the Department and its courses have been planned primarily to give the student such supervision, instruction, and experience as will enable him to secure and conserve his own health while in the University, and to provide him with every means possible for recreation. This involves two main lines of activity, as outlined below.

HYGIENE

1. Individual Instruction in Hygiene.—Physical examinations are made of each student in order to give the best advice as to the exercises or sports to be undertaken and to find defects, the proper treatment of which may add to the health and efficiency of the student.

2. Class Instruction in Hygiene.
2 units, autumn quarter (BROWNE)
autumn, 31

3. Teachers' Course.
winter quarter
winter, 67

PHYSICAL TRAINING

Attendance at three one-hour periods each week is required of all freshmen and sophomores. Students satisfying the requirements of the department will be credited with six units for graduation. Seniors and juniors who have no physical training deficiency may qualify for unit credits by registering for work in the department.
autumn, 802; winter, 1006; spring, 1018; summer, 364

PROFESSIONAL COURSES FOR TEACHERS

LECTURE COURSES

1. The Growth and Development of the Child, including Health Supervision or Control of Growth Conditions.—(Education 3.)
2½ units (DARSIE) MTWThF 8
summer, 46

2. The Organization and Leadership of Physical Education in the High Schools.
2½ units (STOLZ) MTWThF 8
summer, 20

3. Physiology of the Muscular and Nervous Systems.—With special reference to the analysis of the functional effects of physical activities.
2½ units (SHAFER) MTWThF 9
summer, 16

4. Kinesiology.
Lecture room, Encina Gymnasium.
2½ units (BROWNE) MTWThF 9
summer, 18

5. Physical Examinations and Growth Divergences.
2½ units (BROWNE) MTWThF 10
summer, 21

6. Theory, Principles, and History of Physical Education.
1½ units (STOLZ) MWF 10
summer, 18

7. The Principles of Teaching and Leadership, including an introduction to the Teaching of Hygiene.—First three weeks.
1½ units (STOLZ) MTWThF 11
summer, 23

8. The Adaptation of Physical Activities.—Second three weeks.
1½ units (STOLZ) MTWThF 11
summer, 20

9. First Aid to the Injured, including Conditioning of Athletes.—Encina Gymnasium.
1 unit (MALONEY) MW 1
summer, 28

LECTURE AND LABORATORY COURSES

11. Methods in Apparatus Gymnastics and Gymnastic Drills.—Gymnasium management and programs.
1½ units (ROGERS) MTWThF 3
summer, 12

12. Methods in Teaching Soccer Football.
1 unit, first two weeks (MALONEY) MTWThF 3
summer, 22

14. Methods in Teaching Boxing.
1 unit, third two weeks (MALONEY) MTWThF 3
summer, 14

15. Methods in Teaching Track and Field Events.
1½ units, first three weeks (MALONEY) MTWThF 4
summer, 28

16. Methods in Teaching Baseball.
1½ units, last three weeks (SEAY) MTWThF 4
summer, 12

17. Methods in Teaching American Football.
2 units, first four weeks (POWELL) MTWThF 5
summer, 49

18. Methods in Teaching Basketball.
1 unit, last two weeks (POWELL) MTWThF 5
summer, 25

19. Elementary Swimming.
No credit (SEAY) Hours to be arranged with instructor

22. Recreation.—Opportunity for general participation in various activities: Swimming, Tennis, Baseball, Handball, Volley Ball, hikes to mountains, lakes, and seashore, and social dancing.

PHYSICAL EDUCATION AND PERSONAL HYGIENE

WOMEN

Helen Masters Bunting (Director), Clelia Duel Mosher (Medical Adviser), Assistant Professors.

Yolanda Shaw Allen, Greta Johannsen Brandsten, Lois Marjorie Kendall, Instructors.

Georgina Meyer Burk, Secretary.

Additional Summer Quarter Staff

Lila Beebee, M. D. (formerly Medical Adviser, Mills College).

Signe Elizabeth Hagelthorne (Director of Physical Education, Public Schools, San Francisco).

Melvin L. Darsie (Department of Education), Stanford University.

George Daniel Shafer (Department of Physiology), Stanford University.

Edith Ueland (Instructor in Physical Education, University of California).

The aim of Roble Gymnasium, as a laboratory of personal hygiene, is to improve the standard of health of the women and to increase their mental and physical efficiency; to encourage the habit of exercise; to foster a spirit of democracy and sportsmanship; and to stimulate a widespread interest in physical activity of all kinds.

Physical education is required of all undergraduate women during their first six quarters in the University. In general the arrangement will be as follows: two quarters gymnastics, one quarter dancing, one quarter swimming, one quarter athletics, last quarter choice of any course offered. A physical examination is made of each student in order to give advice as to work to be undertaken and to aid the student in correcting physical defects.

One unit of university credit per quarter will be given for three hours per week of satisfactory work in a regular class, whether elective or required.

1. Physical Training.

Gymnastics.

a. Elementary Swedish Gymnastics (3 hours). Required of freshmen.

1 unit per quarter
winter, 141

b. Advanced Swedish Gymnastics (3 hours). Required of sophomores, elective for juniors and seniors.

1 unit per quarter

c. Corrective Swedish Gymnastics (3 hours). Required of freshmen and sophomores whose posture requires special correction; elective for juniors and seniors. Open only on consultation.

1 unit per quarter
autumn, 23; winter, 68; summer, 55

d. Restricted Swedish Gymnastics (3 hours). Required of freshmen and sophomores whose physical condition is such that full work would not be advisable; elective for juniors and seniors. Open only on consultation.

1 unit per quarter

Athletics. Archery, Baseball, Basketball, Hockey, Tennis, or Volley Ball. One quarter required in freshman or sophomore year; elective for juniors and seniors.

1 unit per quarter
(archery) *autumn, 17; winter, 15; spring, 25;* (baseball) *spring, 12;* (basketball) *winter, 69;* (hockey) *autumn, 127;* (tennis) *autumn, 80; spring, 57;* (fencing) *autumn, 17; winter, 4*

Dancing. *a.* Folk. *b.* Aesthetic. *c.* Interpretative and natural. One quarter required in freshman or sophomore year; elective for juniors and seniors.

1 unit per quarter
autumn, 28; spring, 28

Equitation. Open only to seniors.

1 unit per quarter
winter, 30; spring, 30

Swimming.

a. Elementary.

b. Intermediate. Requirement, 75 ft. side underarm stroke.

c. Advanced. Requirement, 75 ft. crawl or trudgeon stroke.

d. Diving. Requirement, straight dive from three-foot board.

One quarter required in freshman or sophomore year; elective for juniors and seniors.

1 unit per quarter
(swimming) *autumn, 64; winter, 12; spring, 121; summer, 119;* (diving) *autumn, 15; spring, 23; summer, 12*

2. Personal Hygiene.—Three lectures and demonstrations per week. Open to all women students.

3 units, spring and summer quarters (Mosher) MWF 11
spring, 12; summer, 6

Professional Courses for Teachers

The purpose of these courses was to enable the University to meet the demands of California and other states in the matter of preparation, training, and certification of teachers of physical education.

COURSES IN THEORY

1. Organization, Leadership, and Adaptation of Activities in High Schools.—Principles in organizing and adapting activities to local High School conditions, facilities, and time available; the psychology of leadership.

1½ units (HAGELTHORNE) MWF 8
summer, 5

2. Organization, Leadership, and Adaptation of Activities in Elementary Schools.—Principles in the organization and adaptation of analyzed activities to the needs, capacities, and incentives of children by age periods, with sex differentiations, and with reference to local elementary school conditions, facilities, and time available; organizing a program for each grade.

1½ units (HAGELTHORNE) MWF 9
summer, 5

3. Principles of Physical Education.—The special aims and functions of physical education.

1½ units (HAGELTHORNE) MWF 10
summer, 14

4. Physical Examinations.—Methods and practice in determining physiological deviations from the normal as found in school children.

2½ units (BEEBEE) MTWThF 10
summer, 4

5. Hygiene Teaching.—Methods in developing habits, ideals, and effective information in living according to the laws of hygiene.

1 unit (BEEBEE) MW 11
summer, 7

6. Child Pathology.—Study of defects, handicaps, and common ailments of children.

1 unit (BEEBEE) TTh 11
summer, 11

8. Kinesiology.—The study of large muscle groups with reference to action and to the specific training received in special activities.

2½ units (BUNTING) MTWThF 11
summer, 5

9. Growth and Development of the Child.—A study of the physical basis of education, including such topics as growth, physical defects, common disorders, preventive hygiene, fatigue and corrective work. Lectures and class discussions, following a text. (Education 3.)

1½ units (DARSIE) MWF 8
summer, 46

10. Health Supervision in Schools.—A study of plans for health supervision in schools, health grading, the school clinic, transmissible diseases, school housekeeping, the teaching of hygiene, the teacher's

health, and some consideration of the hygiene of the school plant. Lectures and class discussion, following a text. Courses 9 and 10 should be taken together as a combined course. (Education 16.)

1 unit (DARSIE) TTh 8
summer, 47

METHODS AND PRACTICE IN SPECIAL ACTIVITIES

11. Methods and Technique in Special Corrective Exercises.—Study of types of faulty posture and methods and exercises for correction of same.

2½ units (KENDALL) MTWThF 9
summer, 3

12. Formal Activities.—Study of formal activities through all grades, from story plays to formal Swedish drills. Methods, technique, and practice teaching.

2½ units (KENDALL) MTWThF 10
summer, 5

13. Apparatus Gymnastics.—Methods and practice in apparatus gymnastics.

2 units (KENDALL) MTWThF 11
summer, 3

14. Aesthetic Dancing.—Study of technique and methods of teaching and practice in aesthetic dances especially adapted to High Schools.

2 units (UELAND) MTWThF 2:05
summer, 5

15. Folk Dancing.—Study and practice of elementary and advanced folk dancing with reference to methods of teaching.

2 units (UELAND) MTWThF 3:05
summer, 7

17. Swimming.—Study of the form of special strokes in swimming and the methods of teaching the same, with special practice.

2 units (BRANDSTEN) MTWThF 3:05
summer, 2

18. Developmental Athletics.—The organization of individual all round athletics; the Decathlon and scoring achievement; games of simple organization; relay races; volley ball.

2 units (UELAND) MTWThF 4:05
summer, 6

[NOTE: All swimming classes as listed for the regular University students were also open to students taking these professional courses.]

FACILITIES

The equipment for women consists of a gymnasium and outdoor swimming pool, with dressing rooms and showers and electric hair driers. The pool is supplied with water from the regular university reservoir, and the water is in continuous circulation through the sterilizing plant

day and night. The women's athletic fields contain two basketball courts, two hockey fields, two baseball diamonds, one volley ball court, seven tennis courts and two handball courts.

Regulations and Requirements

Costume.—Black bloomers and plain white long-sleeved middy blouse are required for all classes other than swimming. Regulation gymnasium shoes are required for gymnastic and outdoor classes. Ballet slippers are required for dancing classes. Swimming suits are provided by the University. Each student provides her own caps and towel tickets. All outfits may be purchased at Roble Gymnasium. It is urged that students avail themselves of this opportunity, as outfits not fulfilling requirements will be rejected.

Tennis.—The student is required to furnish her own racquet and balls.

Removal of Property.—All suits, shoes, racquets, or personal property, not claimed within three days after the close of classes in this department each quarter will be collected and disposed of.

Fees.—A fee of $1.00 per day will be imposed for needless late registration in required classes. A special fee of $5.00 is required of graduate students taking work in physical training. A fee of $2.00 will be charged all students taking archery or fencing.

Physical Examinations.—All newly registering students are required to have a brief physical examination. Appointments for the same must be made at time of registration. All examinations for women are conducted by the Medical Adviser at Roble Gymnasium.

PHYSICS

David Locke Webster, Professor.
Frederick John Rogers, Associate Professor.
Joseph Grant Brown, Elmer Reginald Drew, Perley Ason Ross, Assistant Professors.
George Russell Harrison, Instructor.

1. General Physics.—This course is intended primarily for pre-medical and other non-technical students, and requires no mathematics beyond elementary algebra and geometry. This course does not constitute an approved preparation for advanced courses in Physics, except when completed with a grade above the average.

1a. Mechanics and Heat.—Forces and their effects, in simple structures at rest and on bodies in motion, including the gyroscope. Simple machines. The development of the exact statements of the laws of mechanics from the conceptions of ordinary experience. Energy as a measured quantity.

Heat phenomena, largely from the viewpoint of the transformations of energy and its conservation.

Three lectures and one or two laboratory periods per week. (The 2-unit laboratory sections are primarily for pre-medical and chemistry students.)

4 or 5 units, autumn quarter (WEBSTER, DREW) Lec. MWF 8, 9; Lab., Sec. I, MT 1:05–4:05; Sec. II, TTh 8–12; Sec. III, Th 1:05–4:05; Sec. IV, F 1:05–4:05
autumn, 92

1b. Light and Electricity.—How we see objects. Mirrors, lenses, microscopes, and telescopes as aids to vision. Prerequisite: *1a* or the equivalent.

Direct current phenomena, and their relation to electrostatics and to the theory of electrons. Electro-magnetic induction, the direct current dynamo and motor, and simple alternating current phenomena.

winter quarter, with the same schedule as in 1*a*.
winter (2 sections), 41, 37

1c. Modern Physics.—The aims and methods of modern physics. Recent applications of electronic and molecular effects. The present status of the problem of the structure of matter. Prerequisite: *1a* and *1b* or the equivalent. Three lectures per week.

3 units, spring quarter (WEBSTER) Lec. MWF 9
spring, 62

2-3. General Physics.—These courses are intended primarily for students in Engineering, Physics, and Mathematics, or others having an equivalent mathematical preparation. Entrance credit in Physics is a prerequisite, although students without such preparation may be admitted by special arrangement which, in course 2, will involve registration for an extra unit of recitation work.

Course 2 begins in the winter quarter, with three lectures and one or two laboratory periods weekly. Course 3 begins in the autumn quarter, with two lectures and two or three laboratory periods weekly. Any subdivision of one course may, if necessary, be substituted for the corresponding subdivision of the other.

Physics majors, and students who plan to teach Physics, should take course 3, with the full five units, on account of the greater emphasis which it places on laboratory work.

2a–3a. Mechanics.—Force, work, power, and energy, and their relations to velocity and acceleration. The C. G. S. mechanical units. Oscilla-

tions and wave-motion. Friction, elasticity, viscosity, surface tension, and fluid pressure.

(*2a*) 4 or 5 units, winter quarter (Ross)
Lec. MWF 11; Lab. (one or two periods) MTW 1:05–4:05
(*3a*) 4 or 5 units, autumn and *summer quarters (autumn, HARRISON; summer, BROWN) Lec. TTh 11; Lab. (two or three periods) WThF 1:05–4:05
autumn (3a), 38; winter (2a), 85; summer (3a), 26

2b–3b. Heat and Light.—Thermometry, expansion, calorimetry, change of state, and transfer of heat; reflection, refraction, and dispersion of light; microscopes and telescopes. Prerequisite: course *2a* or *3a*.

(*b*) 4 or 5 units, spring quarter (HARRISON)
Lec. MWF 11; Lab. (one or two periods) MTW 1:05–4:05
(*3b*) 4 or 5 units, winter quarter (BROWN)
Lec. TTh 11; Lab. (two or three periods) WThF 1:05–4:05
winter (3b), 17; spring, (2b), 84

2c–3c. Electricity.—Electrostatic induction, electric and magnetic fields of force, electric and magnetic circuits. Electromagnetic induction, electric and magnetic energy transformations. The C. G. S. and practical units of electrical quantities. Prerequisite: course *a*.

(*2c*) 4 or 5 units, autumn quarter (ROGERS)
Lec. MWF 11; Lab. (one or two periods) MTW 1:05–4:05
(*3c*) 4 or 5 units, spring quarter (DREW)
Lec. TTh 11; Lab. (two or three periods) WThF 1:05–4:05
autumn, 78; spring (2c), 15

2d. Electricity and Electrical Measurements.—Precise measurements of current, E. M. F., resistance, capacitance, inductance, and the magnetic properties of iron. Lectures on the above topics and also on topics omitted in the preceding course, such as: Alternating currents; induction coils and transformers; electric oscillations and electric waves; electric discharges, cathode rays, and X-rays.

(*2d*) 4 (or 5) units, winter quarter (ROGERS)
Lec. TTh 11; Lab. (two or three periods) MTThF 1:05–4:05
winter, 63

4. Sound.—A study of elastic waves in material media. Wave machines, ripple troughs, and lantern slides will be used for illustration. Propagation and characteristics of sound; resonance; interference; musical instruments and musical scales; production and properties of high frequency sound (supersonics). Two lectures and two or three laboratory periods per week. Prerequisite: course *1a*, or *2a*, or *3a*.

4 or 5 units, summer quarter (BROWN)
summer, 7

5. Light.—A study of refraction, interference, and polarization phenomena on the basis of ether waves. Two lectures and two or three laboratory periods per week. Prerequisite: course *2a*, or *3a*.

4 or 5 units, autumn quarter (BROWN) Lec. TTh 9; Lab. MTW 1:05–4:05
autumn, 40

6. Optical Instruments.—Geometrical optics of the prism, the thick lens, and combinations of lenses, as used in optical instruments. Theory

of the diffraction grating and interferometer. Resolving power of instruments. Prerequisites: course 5 and trigonometry. Three lectures and one laboratory period per week.

4 units, winter quarter (DREW) Hours by arrangement
winter, 1

7. Physical Optics.—Lectures on spectroscopy, magneto-optics, refraction constants, optical activity, and fluorescence. Laboratory work with the spectrometer, spectroscope, and interferometer. Prerequisites: courses 5 and 6.

4 units, autumn quarter (Ross) Lec. TTh 11; Lab. ThF 1:05–4:05
autumn, 1

8. Ions and Electrons.—Ionization and conductivity of electrolytes. Ionization and conductivity of gases. Electrons in vacuum tubes. Electron theory of metals. Electron theory of magnetism. X-rays and crystal structure. Prerequisites: courses 2*c* and 2*d* or their equivalent.

5 units, spring quarter (ROGERS) Hours by arrangement
spring, 8

9. Principles of Radiotelegraphy.—Lectures on modern developments in wireless communication, with selected experiments on the design, manipulation, and control of transmitting and receiving apparatus. Open to students having credit in course 2*d*, or may be taken concurrently with it. Two lectures and one laboratory period per week.

3 units, winter quarter (HARRISON) Lec. TTh 8; Lab. by arrangement
winter, 8

10. Radioactive Transformations.—Lectures, lecture experiments, and a few laboratory experiments on radioactivity. Prerequisite: course 8 (Ions and Electrons), or may be taken concurrently with it.

2 units, spring quarter (Ross) Lec. TTh 11

11. Theoretical Mechanics.—Chiefly a problem course with the emphasis on dynamics rather than statics. Prerequisites: course 2 or 3, and calculus.

3 units, winter and spring quarters (Ross) Lec. MWF 9
winter, 1; spring, 1

12. Mechanical Measurements.—A course in exact measurements of mass, length, time, gravity, elasticity, surface tension, viscosity, etc. Three laboratory periods per week. Prerequisite: course 2*a* or 3*a*. Given in alternate years with course 4.

3 units, spring quarter (BROWN) Hours by arrangement

13. Properties of Matter.—Lectures and assigned reading with special emphasis upon cohesion phenomena such as surface tension, compressibility, vapor pressure, critical point, etc. Prerequisite: course 2 or 3.

2 units, autumn quarter (Ross) Lec. TTh 9

14. Thermodynamics.—Extended discussion of the second law of thermodynamics, and its application to physical and chemical transformations. Prerequisites: course 2 or 3, and calculus.

3 units, autumn quarter (DREW) Hours by arrangement

15. Oscillations and Waves.—The mathematical theory of mechanical and electrical oscillations of one and two degrees of freedom. Forced oscillations, damping, and resonance. Wave propagation, stationary waves, Fourier's theorem, and the analysis and synthesis of complex periodic motions. Prerequisite: course 11, or its equivalent.

5 units, autumn quarter (ROGERS) MTWThF 9
autumn, 2

16. Electrical Theory.—Mathematical theory of electric forces, fields, and potential. The Faraday-Maxwell theory of dielectric stresses. The circuital laws of electromagnetism. Electromagnetic oscillations and waves. Poynting's theorem and the pressure of radiation. Prerequisites: courses 2*d*, 11, and 15, or their equivalents.

5 units, winter quarter (ROGERS) MTWThF 9
winter, 1

17. The Kinetic Theory of Gases.—The properties of gases deduced from the mechanics of molecules. Maxwell's law of the distribution of velocities. The law of the equipartition of energy. Application of the kinetic theory to the Brownian movement and the electron theory of metals. Prerequisite: course 11.

3 units, spring quarter (ROGERS) By arrangement

18. Radiation and the Quantum Theory.—Discussions of topics in radiation and quantum theory, and experimental evidence on them, the topics to be chosen with reference to the interests of the members of the course.

3 units, autumn and winter quarters (WEBSTER)
autumn, 6

19. Teacher's Course in Physics.—The development of the scientific method of teaching physics and practice in outlining courses for use in the high school. Two lectures and one laboratory period per week. Prerequisite: course 3 or its equivalent.

3 units, summer quarter (BROWN) By arrangement
summer, 5

20. Literature of Physics.—The early history of physics. Readings and frequent reports on the work of eminent physicists. This course may be taken for two or more quarters, but the work of the first quarter will be largely confined to the discoveries previous to the nineteenth century.

2 units, any quarter (ROSS) By arrangement
autumn, 1

21. Investigation and Research.—This course includes in addition to work on original problems both experimental and theoretical, any preparation for such work which is not properly included under the preceding courses.

5 units, any quarter (MEMBERS OF THE DEPARTMENT) By arrangement

22. Journal Club.—Oral and written reports on the current literature of physics by the department faculty and graduate students.

Autumn, winter, and spring quarters F 4:15–6

For graduation in the department the minimum requirement is 60 units of Physics and Chemistry, of which at least 45 units must be Physics.

THE TEACHER'S RECOMMENDATION.—The minimum requirement for a minor is twenty-five units of Physics, which must include courses 3 and 19. For a major, twenty hours of Physics, including course 4 or course 5, in addition to the requirements for a minor are necessary.

LABORATORY FEES.—Courses with one laboratory period, $3 per quarter; two, $4 per quarter; three, $5 per quarter.

PHYSIOLOGY

ERNEST GALE MARTIN, Professor.

FRANK WALTER WEYMOUTH, Associate Professor.

JAMES PERCY BAUMBERGER, JAMES ROLLIN SLONAKER, ARTHUR GIBSON VESTAL, Assistant Professors.

GEORGE DANIEL SHAFER, Instructor.

JAMES MONTROSE DUNCAN OLMSTED, Acting Instructor.

OLENUS LEE SPONSLER, EDNA ELIZABETH PERRY, Assistants in Instruction (General Biology).

GENERAL BIOLOGY

(See under Biology, p. 125)

1. Lectures.

3 units, autumn and *winter quarters (BURLINGAME, DOANE, HEATH, MARTIN, PEIRCE, WILBUR) (autumn) MWF 8; (winter) TThS 8

2. Lectures.

3 units, winter and *spring quarters (ABRAMS, BURLINGAME, FISHER, HEATH, MARTIN, SMITH, TERMAN, VESTAL, WILBUR) MWF 8

a. Laboratory.

3 units, autumn, *winter, and *spring quarters (VESTAL, SPONSLER, PERRY) MWF 1:05–4:05, or TTh 1:05–4:05 and S 8–11

PHYSIOLOGY

1. Elementary Physiology.—The structure and functions of the body with special reference to the mechanisms of external adaptation, namely, muscles, nerves, and sense organs. Designed, primarily, for students who are not looking forward to the study of Medicine. Intended to impart a general conception of relationship of the human body to its environment. Textbook: The Human Body, Martin, Advanced Course, Tenth Edition. Open to students who have at least ninety units of college credit, or forty-five units, including previous training in Biology and Chemistry.

5 units, autumn quarter (SHAFER, MARTIN) Lec. MWF 10; Lab. ThF 1:05–4:05
autumn, 16

2. Elementary Physiology.—The structure and functions of the body with special reference to maintenance, growth, and energy liberation. In this course, special attention will be paid to circulation, digestion, excretion, and metabolism. Although designed to offer in connection with course 1 a survey of the field of human physiology, this course is planned so that it may be taken independently of course 1. Textbook: The Human Body, Martin, Advanced Course, Tenth Edition. Requirements for admission the same as for course 1.

5 units, winter quarter (SHAFER, MARTIN) Lec. MWF 10; Lab. MT 1:05–4:05
winter, 14

S. General Physiology.—This course is designed to give a general survey of the physiology of living things with special reference to marine animals and the application of the fundamental principles thus developed to the functions of other forms, including man. It is planned to accompany the elementary course in Zoology given at the Hopkins Marine Station, and to be so coördinated as to supplement the morphological conceptions developed in that course with the basic principles of physiology, thus furnishing to students a comprehensive survey of Biology. (For further details consult the announcement of the Hopkins Marine Station.) Textbook: The Human Body, Martin, advanced course, tenth edition. For regularly enrolled undergraduates the requirement will be concurrent registration in General Zoology; elementary chemistry and botany are highly desirable. To those enrolled only in the summer quarter the course is open with no other restriction than evidence of ability to take it with profit.

5 units, summer quarter, at Hopkins Marine Station (WEYMOUTH, BAUMBERGER, OLMSTED) MTW 1:30–4:30
summer, 14

P. Outline of Physiology.—A brief lecture course covering the fields of muscle, nerve, central nervous system, and sense organs. Primarily for students of Physical Education.

2½ units, summer quarter, first half (SHAFER) MTWThF 9

3. Principles of Physiology.—An advanced study of the fundamental principles of physiology. The field is surveyed from the standpoint of the functioning of single cells and of multicellular organisms. An especial effort is made to familiarize the student with basic phenomena and their interpretation. The course serves primarily as a preparation for courses 4 and 5, but is designed to meet the needs of advanced students who desire a general survey of the field and are unable to devote the time required for taking courses 3, 4, and 5. Required of majors in the department. Prerequisites for majors: eighteen units of Biology, including Histology; Physics 1, or its equivalent; Chemistry up to and including Physiological Chemistry. Advanced students of other departments presenting less than these prerequisites may be admitted on recommendation of their major departments provided that their previous training is of a character to enable them to take the course with profit; it is desirable that such training include Biology and Elementary Chemistry. Textbook: Howell's or Starling's Physiology.

5 units, winter quarter (MARTIN, BAUMBERGER, SLONAKER)
winter, 55 Lec. MWF 8; Lab. ThF 1:05–4:05

4. Physiology of Maintenance.—The detailed application to man of the general principles developed in course 3, so far as they relate to bodily maintenance. The laboratory work will be based, as far as possible, on mammals, including the human body itself. Textbook: Howell's or Starling's Physiology. Required of majors in the department. Prerequisite: course 3.

5 units, spring quarter (MARTIN, BAUMBERGER, SHAFER, SLONAKER)
spring, 55 Lec. MWF 8; Lab. ThF 1:05–4:05

5. Physiology of Adjustment.—The detailed application of the principles developed in course 3 to the mechanisms by which in mammals and man the organism is adjusted to its environment; thus comprising a study of the sense organs, the nervous system, and the motor apparatus. Prerequisites as in course 3. Advanced students of other departments may be admitted on the terms stated under course 3 provided they present such work in the anatomy of the nervous system and sense organs as will enable them to profit by the course. Required of majors in the department. Textbooks: Herrick's Introduction to Neurology, Howell's Physiology or Starling's Physiology.

5 or 6 units, winter quarter (WEYMOUTH, BAUMBERGER)
winter, 33 Lec. TThS 9; Lab. MT or ThF 1:05–4:05

6. Journal Club.—A study of physiological literature, with oral and written reports. Required during two quarters of majors in the department.

1 unit, autumn, winter, and spring quarters (DEPARTMENT FACULTY)
autumn, 1; winter, 3; spring, 9 By arrangement

7. Special Physiology.—An advanced course open to students who have had one of courses 3, 4, or 5. Designed to afford opportunity for the advanced study of selected subjects in Physiology. The work will be planned for the individual student.

1 to 5 units, any quarter (Department Faculty) By arrangement
winter, 4; spring, 13; summer (at Hopkins Marine Station), 13

8. Research in Physiology.

(Department Faculty) By arrangement

Students will be recommended for the A. B. degree by the Department of Physiology who have fulfilled the requirements for admission to the Stanford Medical School, have taken courses 3, 4, 5, and two units of course 6 within the department, or equivalent courses elsewhere, ten additional units either within the department, or in the department of Anatomy or Bacteriology, and lecture and laboratory courses in physiological chemistry to the amount required by the Stanford Medical School. Anatomy 1 (Histology) is a prerequisite, also, and can not be counted toward the ten additional units mentioned above as optional from the Department of Anatomy.

The preliminary requirements of the Stanford Medical School are: Fifteen quarter units of college biology (General Biology, Comparative Anatomy, and Embryology usually offered); general chemistry, qualitative and quantitative analysis, lecture course in organic chemistry (24 units of chemistry); thirteen quarter units of college physics; nine quarter units of college English; a reading knowledge of either French or German.

Students who have completed the work of the Lower Division will be admitted as majors in the department, but unless they have taken forty or more units of science, including both general biology and general chemistry, they will probably find it impossible to satisfy the departmental requirements within the regularly allotted six quarters.

The Department requirement for students looking forward to Medicine is designed to enable them to cover the required pre-medical subjects and the work of the first year in the Medical Department of this University, or to fit them to undertake to advantage the work of other first-class medical schools.

The Teacher's Recommendation.—Programs are offered for students seeking the teacher's recommendation as follows: Teaching major: Elementary Chemistry, 9 units; Biology, 18 units, including either Comparative Anatomy, Vertebrate Embryology, or Histology; Physiology, 15 units (courses 3, 4, and 5).

Teaching minor: Elementary Chemistry, 9 units; General Biology, 9 units; Physiology, 10 units (courses 1 and 2).

POLITICAL SCIENCE

†Victor J. West, Edwin Angell Cottrell, Professors.
Arthur N. Holcombe (Harvard), Acting Professor (Summer Quarter).
Frank M. Russell, Acting Assistant Professor.
Amelia L. Hedges, Research Assistant.

Elementary and General Courses

Requirements for the A. B. degree in Political Science: Forty units of Political Science, for which certain courses in Law, Economics, History, and Philosophy may be substituted at the discretion of the department. The forty units, however, should include two seminar courses in Political Science, and the course in Constitutional Law. It is the purpose of the department to arrange the remainder of the program of each of its major students to fit his particular aims. Students taking Political Science as a major with the intention of preparing for journalism are referred to the Announcement of Journalism on page 191.

1. Problems of Citizenship 3: Political Problems.—Fundamental political conceptions: state, government, nature and source of public authority, individual liberty; governmental organizations; governmental functions; political parties; international relations; duties of citizens. An elementary course required of Lower Division students. Not open to seniors or graduates. This course, or its equivalent, is prerequisite for all other courses offered by the department.

4 units, autumn, *winter, and *spring quarters (Cottrell, Russell) MTWTh 10
autumn, 235; winter, 185; spring, 275

2. State and Local Government.—Township, municipal, county, and state government in the United States, with special attention to California. (Open to first-year students in 1921–22 only by permission.)

5 units, winter quarter (Cottrell) MTWThF 8
winter, 97

Intermediate Courses

[Not open to students who have less than 40 units of university credit.]

10. Comparative Federal Government.—An inquiry into the operation of the federal principle in the United States, Germany, Switzerland, Argentina, Canada, Australia, and South Africa. Concerned chiefly with the "division of powers" and the relationships between central and local governments.

4 units, spring quarter (Russell) TWThF 10
spring, 42

† Leave of absence for year 1920–21.

11. Parliamentary Government.—A study of those European governments of which the responsible ministry is the characteristic feature; especial attention to England and France. Emphasis on the relationships between the representative assembly and the executive.

4 units, autumn and *summer quarters; autumn (Russell), summer (Cottrell) *autumn, 25; summer, 22* TWThF 8

12. Elections.—The organization of the electorate for the performance of the functions of direction and control of governments; theories of voting; qualifications for voting; election methods—nominating practices, types of ballot, safeguards against fraud, etc.

4 units, summer quarter (Holcombe) TWThF 11
summer, 16

13. Legislatures and Legislation.—Composition, organization, and functions of representative assemblies; legislative procedure for control purposes and for law-making.

4 units (West) [Not given in 1920–21]

14. Administration.—An examination of the organization and activities of administrative departments and commissions of the federal, state, and municipal governments.

4 units, autumn quarter (Cottrell) TWThF 9
autumn, 52

Advanced Courses

[Not open to students who have less than 80 units of university credit, except by special arrangement.]

20. History of Political Theory.—Development of political thinking from ancient times to the present: Classical period: Medieval period. Renaissance and Reformation; revolution and reaction; the analytical school; the historical school; recent tendencies.

4 units, summer quarter (Holcombe) TWThF 9
summer, 30

21. American Political Theories.—Development of political thinking in America from colonial times to the present day, including the theories of the Revolution, the Constitution, the Jeffersonian and Jacksonian democracies, the slavery controversy, "states' rights," and modern tendencies.

4 units (————) [Not given in 1920–21]

22. Government in Its Relation to Industry.—A study of political problems as affected by the changes in business organization since the industrial revolution. The "laissez faire" versus the "general welfare" concept of government. Measures needed to make the general welfare concept effective.

4 units (Cottrell) [Not given in 1920–21]

23. Political Parties.—Development of nominating machinery and campaign methods in the United States; party organization; party ac-

tivities; reform movements; the true functions of parties; the party systems of the various countries compared.

4 units, winter quarter (RUSSELL) TWThF 11
winter, 24

24. Administration of Justice.—The principles and methods of administrative and judicial organization and procedure for the enforcement of law—the settlement of controversies and the conviction and punishment for violation of law. (See Law 50.)

25. Problems of Municipal Administration.—A detailed study of the organization, functions, methods, policies, and problems of municipal departments.

4 units, summer quarter (COTTRELL) TWThF 10
summer, 36

26. Methods of Governmental Research.—The purpose of this course is the direction and training of students in methods of collecting and presenting data in governmental and other public fields.

4 units, winter quarter (COTTRELL) TWThF 10
winter, 16

27. International Administration.—Study of the international commissions established prior to the Great War; the coöperating agencies set up by the allied and associated powers; and the international commissions provided for by the Treaty of Versailles.

4 units, spring quarter (RUSSELL) TWThF 9
spring, 34

30. Seminar in Politics.

3 units (WEST) [Not given in 1920–21]

31. Seminar in Government.—Topic for 1920–21: Political Motives.

3 units, spring quarter (COTTRELL) By arrangement
spring, 21

32. Seminar in International Relations.

3 units, autumn quarter (RUSSELL) By arrangement
autumn, 16

The attention of students interested in political science is called to the following courses offered by other departments:

PUBLIC FINANCE. (Economics 21.)
TROPICAL COLONIZATION IN THE FAR EAST. (History 90.)
GOVERNMENTS OF THE FAR EAST. (History 92.)
CONSTITUTIONAL LAW. (Law 10 and 11.)
ADMINISTRATIVE LAW AND PUBLIC OFFICERS. (Law 12.)
MUNICIPAL CORPORATIONS. (Law 13.)
PUBLIC INTERNATIONAL LAW. (Law 14.)
JUDICIAL ADMINISTRATION. (Law 50.)
SOCIAL ORDER AND THE INDIVIDUAL. (Philosophy 8.)
SOCIAL PSYCHOLOGY. (Psychology 9.)

PSYCHOLOGY

FRANK ANGELL, Professor.
JOHN EDGAR COOVER, Associate Professor, and Research Fellow in Psychic Phenomena.
MAUD AMANDA MERRILL, GERTRUDE MAY TRACE, Instructors.
EDWIN G. BORING, Lecturer.

1. General Psychology.—Lecturers and exercises. Not open to first-year students except by permission. Titchener's Textbook of Psychology is used as a book of reference.

3 units, autumn and winter quarters (ANGELL) MWF 11
autumn, 157; winter, 120

2. Experimental Psychology.—The experimental method in psychology. Sensation, perception, attention, affection, suggestion, and other complex mental processes will receive careful study through typical experiments. Prerequisite: credit for or enrollment in course 1. (One, two, or three quarters.)

3 units, autumn, winter, spring, and summer quarters (TRACE) MT 1:05–4:05
autumn, 17; winter, 34; spring, 40; summer, 35

3. Mental Hygiene.—Some of the practical considerations of psychology, their economic use in study and thought, and their application to every-day life. The utilization of psychological principles that make for mental efficiency and health. Especially adapted to freshmen. No prerequisite.

3 units, autumn quarter (————) MWF 9
autumn, 81

4. History of Psychical Research.—Lecture course. A canvass of opinion on psychic phenomena is made from the daily press, from the popular magazines, and from professional literature; a detailed study of the more important investigations by psychical researchers is made; canons of evidence and of experimental method are adduced and the present status of the various psychical phenomena is defined. The psychology of testimony, and the nature of scientific proof are considered in connection with the cases of research chosen for study. Assigned reading, class reports.

5 units, spring quarter (COOVER) [Not given in 1921–22]
spring, 31

5. Psychology of Feeblemindedness.—A study of mental retardation; results of experimental investigations of the complex mental processes; manifestations and etiology. Prerequisite: Psychology 1.

3 units, winter and spring quarters (MERRILL) MWF 9
winter, 15; spring, 21

6. Experimental Psychology.—A course designed for prospective teachers. It deals especially with the learning processes, both simple and complex. Prerequisite: course 1, or equivalent.

3 units, autumn and winter quarters (TRACE) ThF 1:05–4:05
autumn, 24; winter, 16

6a. Experimental Psychology.—A continuation of course 6, but ranging over a wider field. Special studies arranged to meet the needs of individual students.

3 units, spring quarter (TRACE) By arrangement

6b. Experimental Psychology.—Special investigation of the learning process.

2 or 3 units, summer quarter (COOVER) By arrangement
summer, 4

7. Statistical Methods.—A demonstration and working course in statistical methods; theory discussed in connection with practice; the determination and evaluation of measures of central tendency, dispersion, precision, reliability, differences between means and between distributions; seriation and plotting, curve-fitting; correlation. Students provide Davenport's "Statistical Methods" and a polyphase slide-rule; calculating machines and mathematical tables available. Some knowledge of algebra a prerequisite.

5 units, autumn quarter (COOVER) MTWThF 10
autumn, 5

8. Psychophysical Methods.—A seminar course. Brief review of the development of psychophysical methods; of the recognized sources of error in psychological experiment and means of eliminating or measuring them. Application of standard Phi Gamma methods, using Urban's tables, to typical data, usually obtained by the student in his current laboratory work. Discussion of the "psychometric function." Titchener's Quantitative Manual and the professional journals are used for reference. Statistical Methods a prerequisite.

2 units, winter quarter (COOVER) TTh 10
winter, 3

9. Social Psychology.—Theories of social consciousness and the so-called collective mind; an analysis of perceptual, ideational, instinctive, and emotional factors in social consciousness; suggestion and mob mind; brief consideration of institutional and community life. Psychology 1 is prerequisite.

2 units, winter and summer quarters (TRACE) TTh 11
winter, 27; summer, 20

10. Abnormal Psychology (Clinical).—Types of social misfits as they appear in the schools, at the Juvenile Court, and at the County Health Center. An opportunity is presented for training in making mental

diagnoses. Observation of treatment and disposition of cases. Prerequisites: Psychology 1 and 2.

autumn, winter, and spring quarters (MERRILL) By arrangement
autumn, 12; winter, 6; spring, 10

11. Advanced Laboratory Psychology.

3 units, autumn, winter, and spring quarters (ANGELL) By arrangement
autumn, 7; winter, 8; spring, 11

12. Psychological Optics.—Presupposes or accompanies courses 2 and 11, or their equivalent.

3 units, spring quarter (ANGELL) MWF 11
spring, 10

13. Memory, Imagination, and Thought.—A study of memory and learning; methods and results of experimental investigations and the main theories involved. Prerequisite: Psychology 1 or equivalent.

2 units, spring quarter (TRACE) TTh 11
spring, 10

14. Mind and Body.—A seminar course. The problem of the mind-body relationship is first given a brief historical consideration. The psychological postulate of "psychophysical parallelism" is critically inspected. The pertinent data of psychology, patho-psychology, and medical practice with mental disorders (including the aphasias) are collected and studied. The phenomena of the dissociation of personality and of hypnotism are reviewed; and Freudian psychoanalysis is briefly but critically examined from the standpoint of physiological psychology. Prerequisite: Psychology 1.

5 units, spring quarter (COOVER) By arrangement

15. Systematic Psychology.

2 units, autumn and winter quarters (ANGELL) T 2

15a. Current Psychological Literature.

2 units, autumn, winter, and spring quarters (ANGELL)
autumn, 6; winter, 8; spring, 4

16. Psychical Research.—A research course offering opportunity to attack systematically any problem in the field for which the equipment is adequate.

autumn, winter, and spring quarters (COOVER) By arrangement
autumn, 3; winter, 2; spring, 3

17. Research.

3 or 4 quarters (ANGELL, COOVER) By arrangement

18. Systematic Psychology of Sensation and Perception.—A preliminary survey of systems of psychology and an outline of systematic psychology in the light of these systems. For graduates and advanced undergraduates. Prerequisite: Psychology 1 or equivalent.

5 units, summer quarter (BORING) MTWThF 10

ROMANIC LANGUAGES

Oliver Martin Johnston, Clifford Gilmore Allen, Aurelio Macedonio Espinosa, Professors.
John Driscoll Fitz-Gerald, Acting Professor (Summer Quarter).
Stanley Astredo Smith, Alfred Coester, Assistant Professors.
René Levesque, Acting Assistant Professor (Summer Quarter).
Frederick Anderson, William Leonard Schwartz, Instructors.
Edvige Cerruti, Helen Eugenia Haist, Helen Marie Hall, Ethel Lee, Ivan Rush Messenger, Gertrude Louise Peters, Jessie Edna Smith, Ida Stauf, John Parsons Weller, Elizabeth Dana Woodbridge, Assistants in Instruction.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-Latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, the majority of the courses are conducted in the language which forms the object of study.

The department offers advanced courses leading to the degree of Master of Arts and Doctor of Philosophy. The library contains adequate material for graduate courses in French and Spanish literature and philology. The Dante collection is also adequate for graduate work in this subject. The department also accepts candidates for certification as high-school teachers of French and Spanish in California and provides courses to meet the special needs of such candidates. Either French or Spanish may be selected as a major subject. In addition to the elementary course, which does not count as a part of the requirement, majors in French or Spanish must complete the following courses for the degree of Bachelor of Arts:

(1) Second-year course (15 units);
(2) Advanced Composition and Conversation (9 units);
(3) Courses in literature or philology (30 units).

These 30 units must include an outline course in the literature of the major subject (A56 for French majors and B56 for Spanish majors, or their equivalent). It is desirable that the outline course precede the other literary courses in the subject. Of the 30 units required in literature or philology, the student may select 10 units outside of the major subject.

The Teacher's Recommendation.—The requirements for the teacher's recommendation are the same as for the Bachelor's degree

with the exception of the fact that the 30 units under (3) must include the following courses:

A67 for majors in French, B66 for majors in Spanish.

It is also recommended that course 106 in the Department of Germanic Languages be taken at the same time as A67 or B66. A reading knowledge of Latin and German is highly desirable. Recommendations will be given only on the vote of the department and will demand a degree of scholarship above the ordinary passing mark.

Some of the courses scheduled for the Summer Quarter extend through only one term of the quarter. Others extend through both terms, but credit will be granted for work done in either term.

First-year French and Spanish are given by competent instructors under the supervision of the Department Faculty, and a fee of $7.50 per quarter is charged. University credit is given for this work.

Elementary and Intermediate Courses

A. FRENCH

A1. Elementary French.—Training in pronunciation by means of phonetic symbols. Oral work. The elements of French grammar; the regular verb and the verbs *avoir* and *être;* Fraser and Squair, French Grammar, 20 lessons. Reading from Aldrich and Foster's French Reader.

5 units, autumn and *winter quarters (J. E. Smith, Weller, Woodbridge)
(autumn) MTWThF 8, 9, 10, 11; (winter) MTWThF 9
autumn (4 sections), 26, 21, 17, 33; winter, 23

A2. Elementary French (continued).—Oral work continued. Study of the irregular verbs. Fraser and Squair, French Grammar, to end of Part I. Reading from Aldrich and Foster's French Reader. Prerequisite: A1, or one year of high-school French.

5 units, winter and *spring quarters (J. E. Smith, Weller, Woodbridge)
(winter) MTWThF 8, 9, 10, 11; (spring) MTWThF 9
winter (4 sections), 16, 21, 15, 34; spring, 31

A3. Elementary French (continued).—Thorough review of grammar. Oral work. Reading: Labiche, La poudre aux yeux. About, Le roi des montagnes. Prerequisite: A2, or equivalent.

5 units, spring quarter (J. E. Smith, Weller, Woodbridge)
spring (4 sections), 10, 30, 17, 16 MTWThF 8, 9, 10, 11

A21. Second-Year French.—Grammatical review. Composition: Carnahan's French Composition. Reading: Daudet, Tartarin de Tarascon; Dumas, La question d'argent. Outside reading of simple texts with written reports in French. Course conducted as far as possible in French. Prerequisite: A3, or two years of high-school French.

5 units, autumn and *summer quarters (autumn, Anderson, Schwartz Stauf)
MTWThF 9, 10; (summer, Anderson) MTWThF 9
autumn (4 sections), 33, 25, 27, 39; summer, 16

A22. Second-Year French (continued).—Grammar and Composition: same text as in A21. Reading: Balzac, Eugénie Grandet; Augier, Le Gendre de M. Poirier. Outside reading with written reports in French. Conducted as far as possible in French. Prerequisite: A21, or three years of high-school French.

5 units, winter quarter (SCHWARTZ, STAUF) MTWThF 9, 10
winter (3 sections), 29, 39, 49

A23. Second-Year French (continued).—Grammar and Composition; same text as in A21 and A22. Class reading: Dow and Skinner, Quelques Contes des Romanciers Naturalistes; Augier, Le Fils de Giboyer. Outside reading with written reports in French. Conducted in French. Prerequisite: A22, or equivalent.

5 units, spring quarter (SCHWARTZ, STAUF) MTWThF 9, 10
spring (3 sections), 12, 49, 41

A24. French Pronunciation.—Training in French pronunciation by means of practical phonetics. This course is of special interest to prospective teachers. Prerequisite: A3, or the equivalent.

3 units, autumn and summer quarters (autumn SCHWARTZ) MWF 2:05; (summer, SMITH) MWF 11
autumn, 21; summer, 7

A25. French Conversation.—Classroom conversation on various aspects of modern French life and on current events. For students registering for two units, reading in French newspapers and periodicals. Oral reports in French. Prerequisite: A3 or the equivalent. Students should consult the instructor before registering in this course.

1 or 2 units, autumn and summer quarters (ANDERSON) (autumn) MWF 11; (summer) MWF 10
autumn, 15; spring, 16; summer, 11

A26. Second-Year French Reading Course.—Intended for engineers Prerequisite: A3. Courses A26, 27, and 28 are not open to students taking A21, 22, and 23.

3 units, autumn quarter (WELLER) MWF 11
autumn, 11

A27. Second-Year French Reading (continued).

3 units, winter quarter (WELLER) MWF 11
winter, 14

A28. Second-Year French Reading (continued).

3 units, spring quarter (WELLER) MWF 11
spring, 13

A30. Directed Reading.

autumn, 2; winter, 12; spring, 31; summer, 4

B. SPANISH

B1. Elementary Spanish.—The elements of grammar, composition and

conversation. Texts: Espinosa and Allen, Beginning Spanish, lessons I–XXV; Espinosa, First Spanish Reader, I.

5 units, autumn and winter quarters (Haist, Hall, Lee, Messenger, Peters) (autumn) MTWThF 8, 9, 10, 11; (winter) 9
autumn (7 sections), 35, 30, 41, 40, 28, 31, 28; winter (2 sections), 26, 26

B2. Elementary Spanish (continued).—Texts: Espinosa and Allen, Beginning Spanish, lessons XXVI–LIII; Espinosa, First Spanish Reader, II; Quinteros, La Muela del Rey Farfán.

5 units, winter, and spring quarters (Cerruti, Haist, Hall, Lee, Messenger, Peters) (winter) MTWThF 8, 9, 10, 11; (spring) 9
winter (8 sections), 15, 24, 34, 33, 27, 18, 21, 32; spring (2 sections), 24, 27

B3. Elementary Spanish (continued).—Texts: Espinosa and Allen, Beginning Spanish, lessons LIV–LXVIII; Allen, Fábulas y Cuentos; Blasco Ibáñez, La Batalla del Marne.

5 units, spring quarter (Haist, Hall, Lee, Messenger, Peters)
spring (6 sections), 21, 22, 49, 29, 15, 35 MTWThF 8, 9, 10, 11

B21. Second-Year Spanish.—Review of grammar, with abundant practice in conversation and composition. Reading aloud in Spanish, with careful drill in pronunciation. Reading and interpretation of Spanish texts, with a minimum of translation. Conversation in Spanish based on the texts read. Bi-monthly tests in translation and written reproduction of Spanish texts or short stories. Conducted mainly in Spanish.

Composition and conversation (MWF). Text: Espinosa-Allen, Elementary Spanish Grammar, lessons XVI–XLIX.

Reading, pronunciation, and conversation (TTh). Texts: Benavente, El Principe que todo lo aprendió en los Libros; Palacio Valdés, La Hermana San Sulpicio.

5 units, autumn quarter (Coester, Messenger, Hall, J. E. Smith) MTWThF 8, 9; summer (Coester) MTWThF 11
autumn (5 sections), 46, 29, 7, 35, 25; summer, 25

B22. Second-Year Spanish (continued).—Composition and conversation (MWF). Texts: Espinosa, Spanish Composition and Conversation, Part I. For grammar review and reference, Espinosa-Allen, Elementary Spanish Grammar. Original exercises in Spanish composition. Final examinations on all regular and irregular verbs and the use of the subjunctive.

Reading, pronunciation, and conversation (TTh). Texts. Martinez Sierra, Teatro de Ensueño; Blasco Ibáñez, La Barraca.

5 units, winter quarter (Allen, Hall, Messenger) MTWThF 8, 9
winter (3 sections), 31, 51, 31

B23. Second-Year Spanish (continued).—Composition and conversation (MWF). Oral drill in conversation and the mastery of a correct pronunciation. Short stories, and original compositions. Advanced Spanish grammar. Texts: Espinosa, Spanish Composition and Conversation, Part II.

Reading and interpretation of Spanish texts (TTh). Texts: Martinez Sierra, Canción de Cuna; Coester, Cuentos de la América Española.

5 units, spring quarter (ALLEN, ESPINOSA, MESSENGEER) MTWThF 8, 9
spring (3 sections), 49, 18, 39

B24. Spanish Pronunciation.—Lectures and practical exercises in the elements of Spanish pronunciation. Open to all. This course should be taken by Spanish majors in the first year.

2 units, winter quarter (ESPINOSA) TTh 10
winter, 22

B26. Second-Year Spanish Reading Course.—Intended for engineers. Prerequisite: B3.

3 units, autumn quarter (COESTER) MWF 11
autumn, 23

B27. Second-Year Spanish Reading (continued).

3 units, winter quarter (COESTER) MWF 11
winter, 17

B28. Second-Year Spanish Reading (continued).

3 units, spring quarter (LEE) MWF 11
spring, 20

B30. Directed Reading.
autumn, 3; spring, 4

C. ITALIAN

C1. Elementary Italian.—Wilkins, First Italian Book; Goggio, Due Commedie Moderne.

5 units, autumn quarter (STAUF) MTWThF 11
autumn, 13

C2. Elementary Italian (continued).—Grandgent's Italian Grammar. Conversation. Wilkins and Altrocchi, Italian Short Stories. Goldoni, La Locandiera. Prerequisite: C1, or equivalent.

5 units, winter quarter (STAUF) MTWThF 11
winter, 11

C3. Elementary Italian (continued).—Review of Grammar. Composition and Conversation. Wilkins and Marinoni, Italia. Manzoni, I Promessi Sposi (edit. Geddes and Wilkins). Prerequisite: C2, or equivalent.

5 units, spring quarter (STAUF) MTWThF 11
spring, 6

C21. Second-Year Italian.—Review of grammar. Composition and conversation. Reading of selected prose and poetry of the nineteenth and twentieth centuries, with a minimum of translation and particular attention to pronunciation. Collateral reading and reports. Prerequisite: C3 or equivalent.

3 units, autumn quarter (SMITH) MWF 11
autumn, 4

C22. Second-Year Italian (continued).—Prerequisite: C21, or equivalent.

3 units, winter quarter (SMITH) MWF 11
winter, 3

C23. Second-Year Italian (continued).—Prerequisite: C22, or equivalent.

3 units, spring quarter (ANDERSON) MWF 11
spring, 3

D. PORTUGUESE

D1. Elementary Portuguese.—Drill on Pronunciation. Elements of grammar. Reading of easy texts.

5 units, autumn quarter (———) [Not given in 1920–21]

D2. Elementary Portuguese (continued).—Grammar. Composition. Conversation. Reading. Prerequisite: D1, or equivalent.

5 units, winter quarter (———) [Not given in 1920–21]

D3. Elementary Portuguese (continued).—Prerequisite: D2, or equivalent.

5 units, spring quarter (———) [Not given in 1920–21]

II. ADVANCED AND GRADUATE COURSES

A. FRENCH.

A41. Third-Year French Composition and Conversation.—Composition based on French texts. Outside reading and written reports in French. Conducted in French. Prerequisite: A23, or four years of high school French.

3 units, autumn, and *summer quarters (autumn, ANDERSON, WOODBRIDGE) MWF 10; (summer, SMITH) MWF 10
autumn (2 sections), 34; 32; summer, 6

A42. Third-Year French Composition (continued).—Prerequisite: A41, or equivalent.

3 units, winter quarter (SCHWARTZ, WOODBRIDGE) MWF 10
winter (2 sections), 24, 17

A43. Third-Year French Composition (continued).—Prerequisite: A42, or equivalent.

3 units, spring quarter (ANDERSON, SCHWARTZ) MWF 10, 11
spring (2 sections), 18, 13

A44. French Classics.—Reading in class of masterpieces of French literature. Prerequisite: A23, or equivalent.

4 units, autumn quarter (SCHWARTZ) MTWTh 11
autumn, 27

A51. Fourth-Year French Composition.—Translation of connected English prose into French. Original composition. Dictation. Conducted in French. Prerequisite: A43.

3 units, autumn quarter (SMITH) MWF 10
autumn, 17

A52. Continuation of A51.—Prerequisite: A43, or the equivalent.
3 units, winter quarter (SMITH) MWF 10
winter, 13

A53. Continuation of A52.—Prerequisite: A43, or the equivalent.
3 units, spring quarter (ANDERSON) MWF 10
spring, 7

A54. Cours de Style.—Ouvert aux seuls étudiants possédant une connaissance parfaite des principes essentiels de la grammaire française. Thèmes, compositions françaises (narrations, descriptions, etc.). Résumés de chefs d'oeuvre de la littérature française avec commentaire grammatical, en français. Prerequisite: A53, or equivalent.
3 units, summer quarter (LEVESQUE) MWF 10
summer, 3

A55. History of French Civilization.—A brief survey of the history of French civilization from the Middle Ages to modern times; this course is intended to furnish a background to the study of French literature. Prerequisite: A3, or the equivalent.
2 units, summer quarter (LEVESQUE) TTh 10
summer, 6

A56. Outline Course in the History of French Literature.—Pellissier: Historie de la littérature française. Vreeland and Michaud: Anthology of French Prose and Poetry. Outside reading. Conducted in French. Prerequisite: A23, or the equivalent.
5 units, autumn quarter (SMITH) [Not given in 1920–21]

A58. French Literature in the Seventeenth Century.—Lectures on the formation of the classic ideal in France and on the main movements, authors, and works of the classic age. Outside reading and reports. Conducted in French. Prerequisite: A23, or the equivalent.
3 units, autumn quarter (SMITH)
4 units, summer quarter, 1st half (SMITH) MWF 9
autumn, 19; summer, 6

A59. French Literature in the Eighteenth Century.—A study of the main ideas and tendencies of the period as illustrated by the lives and works of its most important authors. Outside reading and reports. Conducted in French. Prerequisite: A23, or the equivalent.
3 units, winter quarter (SMITH) MWF 9
winter, 12

A60. Molière.—The complete works will be read with special attention to the characters in the plays. Readings and reports. Prerequisite: A23, or equivalent.
3 units (SCHWARTZ) [Not given in 1920–21]

A61. The French Historians.—Lectures on French historiography; reading of historical classics from Joinville to Taine. Prerequisite: A23, or equivalent.
3 units (ANDERSON) [Not given in 1920–21]

A62. The French Novel.—Lectures in French on the history of the novel in France. Reading and analysis of four French novels. Prerequisite: A23, or equivalent.

3 units (ANDERSON) [Not given in 1920–21]

A63. The French Drama.—Lectures on the development of the French drama with special emphasis on the nineteenth century. Outside reading and reports. Prerequisite: A23, or equivalent.

3 units, summer quarter (LEVESQUE) MWF 8
summer, 9

A64. Literary Criticism.—Lectures on the history of literary criticism in France. A careful study of Madame de Stael; De L'Allemagne, and various works by Scherer, Taine, and Renan. Prerequisite: A23, or equivalent.

3 units, spring and summer quarters (ANDERSON)
spring, 33; summer, 2 (spring) MWF 9; (summer) MWF 11

A65. French Lyric Poetry.—Course conducted in French. Preliminary study of medieval poetical forms, leading to extensive reading in class of nineteenth century poets. Intended to familiarize students with the best-known masterpieces. Textbooks: Oxford Book of French Verse, Henning's French Lyrics of the Nineteenth Century. Prerequisite: A23, or equivalent.

3 units, winter quarter (SCHWARTZ) MWF 3
winter, 19

A66. The Romantic Movement in France.—A study of the main features of romanticism as manifested in the lives and works of the forerunners and the most important representatives of the French romantic movement. Lectures in French. Outside reading. Class discussions. Prerequisite: A58, or equivalent.

3 units (SMITH) [Not given in 1920–21]

A67. Problems of Teaching French.—Practice in the use of the phonetic method as a means of teaching French pronunciation, review of French grammar, lectures on methods of teaching French, pedagogical bibliography, and suggestions regarding available textbooks. Practice teaching.

3 units, autumn quarter (JOHNSTON) MWF 2:05–305
1 unit, summer quarter (ANDERSON)
autumn, 17; summer, 2

A68. Introduction to the Study of Old French.—Reading and interpretation of old French texts selected from Bartsch-Wiese, Chrestomathie de L'Ancien Français, with a study of Old French Phonology and Morphology.

2 units, autumn quarter (ANDERSON) W 4–6
autumn, 7

A69. French Historical Grammar.—Lectures on Old French Phonology and Morphology.
3 units, winter quarter (JOHNSTON) MWF 2:05
winter, 5

A70. French Historical Grammar (continued).
3 units, spring quarter (JOHNSTON) MWF 2:05
spring, 6

A71. Old French Literature.—French literature from the beginnings to the 15th century, with emphasis on the literary and social traits. Outside reading and reports.
3 units (JOHNSTON) [Not given in 1920–21]

A72. French Arthurian Romances.—Lectures on the romances of the Round Table, the legend of the Holy Grail, and the legend of Tristan and Iseult. Outside reading and reports.
2 units (JOHNSTON) [Not given in 1920–21]

A73. Corneille.
3 units, spring quarter (JOHNSTON) T 2:05–4:05
spring, 14

A74. French Seminary.
3 units, winter quarter (JOHNSTON) T 2:05–4:05
winter, 14

A75. French Seminary.—The Old French Epic.
3 units (JOHNSTON) [Not given in 1920–21]

A100. Thesis.
autumn, 4; winter, 2; summer, 1

B. SPANISH

B41. Advanced Spanish Composition and Conversation.—Review of grammar, with reading and interpretation of literary texts. Oral and written reproduction of short stories and literary material. Original exercises in composition. Prerequisites: courses B21, B22.
3 units, autumn quarter (ALLEN) MWF 11
autumn, 30

B42. Advanced Spanish Composition and Conversation (continued).—Prerequisite: B41.
3 units, winter quarter (ESPINOSA) MWF 11
winter, 20

B43. Advanced Spanish Composition and Conversation (continued).—Translation into Spanish of select English prose. Prerequisite: B42.
3 units, spring and summer quarters (ESPINOSA)
spring, 19; summer, 6 (winter) MWF 11; (summer) MWF 10

B44. Commercial Spanish.—Letter writing and introduction to commercial practice. Prerequisite: B23. (Note: Students electing B44 are expected to take B45.)
3 units, winter and summer quarters (COESTER) MWF 9
winter, 9; summer, 7

B45. Commercial Spanish.—Letter writing continued. Study of commercial documents. Writing of advertisements and circular letters. Prerequisite: B44, or equivalent.

3 units (COESTER) [Not given in 1920–21]

B48. Argentine Literature.—The aim of this course is to acquaint the student with the history and mental characteristics of the Argentines through the medium of their own literary productions. Prerequisite: B23.

3 units, autumn quarter (COESTER) MWF 10
autumn, 9

B49. The Modernista Movement in America and Spain.—Rubén Darío, Gutiérrez Nájera, Silva, Chocano and their influence on Spanish lyric poets since 1898. Prerequisite: B41, or equivalent.

3 units, winter quarter (COESTER) MWF 10
winter, 6

B50. Spanish-American Literature.—General outline. The writings of Spanish Americans will be studied from the point of view of the nationality of the writers and as the product of differing political, social, and geographic conditions. Prerequisite: B23.

3 units, summer quarter (COESTER) MWF 1:05
summer, 6

B51. Curso de composición y estilo.—En este curso se estudian algunas obras literarias en prosa para modelos de estilo. Composiciones originales cada semana. Gramática de referencia: Bello-Cuervo, Gramática de la Lengua Castellana. Prerequisites: B41, B42, B43.

3 units, summer quarter (ESPINOSA)
summer, 3

B52. Curso de composición y estilo (continuación).—Prerequisite: B51.

3 units (ESPINOSA) [Not given in 1920–21]

B53. Curso de composición y estilo (continuación).—Prerequisite: B52.

3 units (ESPINOSA) [Not given in 1920–21]

B54. Advanced Spanish Grammar.—An intensive study of Spanish syntax. Open to teachers and graduate students.

2 units, summer quarter, 1st half (FITZ-GERALD) MTWF 8
summer, 3

B56. Spanish Literature.—Outline course. Fitz-Maurice Kelly: Historia de la literatura española. Lectures and recitations. Prerequisite: B58.

3 or 5 units, winter quarter (ALLEN) MWF 2:05
winter, 19

B58. Spanish Classics.—A study of the principal authors of the classical period. Representative texts will be read of Cervantes, Lope de Vega, Calderón, Alarcón, Tirso de Molina, as well as selections from Ford's A Spanish Anthology. Open to students who have completed courses B21, B22, B23, or their equivalent.

4 units, autumn quarter (ALLEN) MTWF 9
autumn, 27; spring, 1

B59. Spanish Literature in the Eighteenth Century.

3 units, spring quarter (ALLEN) MWF 2:05
spring, 20

B60. Modern Spanish Novel.—A study of the modern Spanish novel and its relation to the development of the novel in France and other European countries. Lectures and collateral readings. Prerequisites: B21, B22, B23, or their equivalents.

3 units (ALLEN) [Not given in 1920–21]

B61. Teatro Español Contemporáneo.—(*a*) Breve resumen de la historia del teatro español en el siglo XIX: Rivas, Gutiérrez, Zorrilla, Bretón de los Herreros, Ayala, Echegaray. (*b*) Estudio de los dramáticos contemporáneos, con atención especial a Galdós, Jacinto Benavente, los Quinteros, Eduardo Marquina y Martínez Sierra. Prerequisites: B21, B22, B23, or their equivalent.

3 or 5 units, winter quarter (ESPINOSA) MWF 9
winter, 13

B62. Dramáticos Contemporáneos.—Galdós, Benavente, Marquina, Martínez Sierra, Valle-Inclán. Prerequisites: B21, B22, B23, or their equivalents.

1 unit (ESPINOSA) [Not given in 1920–21]

B63. The Novel of the Golden Age.—A study of the history of the novel in Spain with readings and interpretations of selected novels of the classic period.

2½ units, summer quarter, 1st half (FITZ-GERALD) MTWThF 9
summer, 4

B64. Early Spanish Lyric Poetry.—A study of the various schools of lyric poets, as the Galacian, the Italian, the National, etc. Prerequisite: B58.

3 units (ALLEN) [Not given in 1920–21]

B65. Modern Spanish Lyrics.—Prerequisites: B21, B22, B23, or their equivalents.

3 units (ALLEN) [Not given in 1920–21]

B66. Problems of Teaching Spanish.—A consideration of the important questions of Spanish pronunciation, grammar, reading, and literary interpretations, together with a discussion of the general questions of

methods of teaching as applied to the teaching of elementary and advanced Spanish. Pedagogical bibliography and school texts. Practice teaching.

2 units, summer quarter, 1st half (ESPINOSA) MTWF 11
summer, 6

B67. Introduction to the Study of Old Spanish.—Lectures on old Spanish Phonology and Morphology, with linguistic exercises based on El Cantar de mío Cid. Ford, Old Spanish Readings.

3 units, summer quarter (ESPINOSA) MWF 2:05
summer, 3

B68. Spanish Historical Grammar.—Lectures and study of Old Spanish texts.

3 units (ESPINOSA) [Not given in 1920–21]

B71. Origins of Spanish Drama.—A history of the drama from the earliest times to its full development with Lope de Vega. Lectures and collateral reading.

3 units, autumn quarter (ALLEN) TTh 2–3:30
autumn, 12

B72. Spanish Seminary.—Old Spanish Ballads. Lectures and investigations on special topics.

3 units, spring quarter (ESPINOSA) Th 2:05–4:05
spring, 16

B73. Spanish Seminary.—Lope de Vega. Lectures and assigned topics.

3 units, winter quarter (ALLEN) Th 2:05–4:05
winter, 8

B74. Old Spanish Literature.—Spanish literature from the earliest times to the beginning of the 15th century. Lectures, reading of texts, and assigned topics.

3 units, spring quarter (ALLEN) MWF 3:05
spring, 8

B100. Theses.

winter, 4; spring, 4

C. ITALIAN

C51. Dante and the Divine Comedy.—Reading and interpretation of the Divine Comedy. Lectures on Dante, the Divine Comedy, and the principal problems of medieval life and thought reflected in the poem. Outside reading and reports. Open to juniors and seniors in all departments.

3 units, autumn quarter (JOHNSTON) MWF 8
autumn, 27

C52. Advanced Italian.—Dante, La Divina Commedia. Study and interpretation of the text; discussion of the literary problems of the poem.

4 units (JOHNSTON) [Not given in 1920–21]

C53. Advanced Italian (continued).

4 units (JOHNSTON) [Not given in 1920–21]

C55. Italian Classics.—Reading and discussion of representative selections of the 13th and 14th centuries. Outline of the literature of the period.

2 or 3 units, autumn and *summer quarters (SMITH) MF 1:05
autumn, 3; summer, 1

C56. Italian Classics (continued).—Selections from authors of the 15th and 16th centuries.

2 or 3 units, winter quarter (SMITH) MF 1:05
winter, 2

E. PROVENÇAL

E51. Introduction to the Study of Old Provençal.—Reading of selected passages from Appel's Provenzalische Chrestomathie, with a study of Old Provençal Phonology and Morphology.

3 units (JOHNSTON) [Not given in 1920–21]

F. GENERAL COURSES

F51. Romance Versification.—The fundamental principles of Romance verse structure, with particular attention to French and Spanish, lectures and practical exercises.

3 units, winter quarter (ESPINOSA) MWF 10
winter, 7

F52. Phonetics.—[See course 131 in the Department of Germanic Languages.]

F53. Latin Syntax.—[See course 12 in the Department of Latin.]

F54. Bibliography and Methods of Romanic Philology.—A brief description of the field of Romanic Philology and of the principal books which deal with it. A discussion of the technique of philological studies.

1 unit, summer quarter (ANDERSON) Th 11

JOURNAL CLUB

The instructors in the department and the advanced students meet on the first Thursday of each month for the discussion of the periodicals and new books.

Th 2–3

SLAVIC

HENRY LANZ, Assistant in Instruction.

SLAVIC LITERATURE.

(The following courses do not require a knowledge of any language other than English.)

C1. Slavic Literature.—It is the object of this course to give a brief account of the folklore and literature of Slavic nations such as Bo-

hemia, Servia, Bulgaria, and Poland, in connection with their history and their religious development. Outside reading and reports.

2 units, four quarters (Lanz) TTh 9
autumn, 34; winter, 46

C2. History of Russian Literature.—The development of literature in Russia since the early Biliny-period to the death of Gogol (1852). Special attention will be given throughout to the relations of Russian literature to social and political conditions, philosophy, and religion. Lectures and reading.

3 units, autumn, spring, and *summer quarters (Lanz) MWF 11
autumn, 19; spring, 10; summer, 18

C3. History of Russian Literature (continuation of C2).—The modern Russian literature, covering the works of Turgenev, Goncharov, Dostoievsky, Tolstoy, and others. Mutual dependence between Russia and West-European literatures will be particularly emphasized.

3 units, winter and summer quarters MWF 11
winter, 11

C4. Leo Tolstoy.—His life and work.

2 units, autumn, spring, and *summer quarters (Lanz) TTh 11
autumn, 44; summer, 20

C5. Theodore Dostoievsky.—His life and work.

2 units, winter and summer quarters TTh 11
spring, 34

Slavic Languages

A1. Elementary Russian.—It is the object of this course to put the students in possession of the elements of the Russian language. Beginning with a study of the alphabet, it covers the course in morphology, syntax, simple conversation, and reading of the easy Russian texts (short stories of Leo Tolstoy). Bondar, Simplified Russian Method.

4 units, autumn quarter (Lanz) MTThF 8
autumn, 2

A2. Elementary Russian (continued).—The study of the aspects of the verbs and advanced practice in conversation and reading.

4 units, winter quarter (Lanz) MTThF 8
winter, 2

A3. Elementary Russian (continued).—Thorough review of grammar; reading and conversation (Bondar).

4 units, spring quarter (Lanz) MTThF 8
autumn, 1; spring, 3

A4. Commercial Russian.—The object of this course is merely practical; it is intended to put the students in possession of the commercial vocabulary and make them able to transact business in Russian language. Special attention will be given to the composition of business letters. Prerequisites: Russian A1, A2, A3.

4 units, summer quarter (Lanz) MTThF 8
winter, 1

A5. Seminary Work.
(LANZ) By arrangement
autumn, 3; winter, 2; spring, 4

A6. Russian Conversation.—For beginners.
(LANZ) By arrangement
autumn, 2; summer, 3

A21. Second-Year Russian.—Reading of Pushkin and Turgenev. Practice in conversation and composition on the basis of the material read. Forbes, Russian Grammar.
3 units, autumn quarter (LANZ) MWF 9

A22. Second-Year Russian.—Chekhov, Stories.
3 units, winter quarter (LANZ) MWF 9
winter, 1

A23. Second-Year Russian.—Reading of modern prose and poetry.
3 units, spring quarter (LANZ) MWF 9

A31. Third-Year Russian.
3 units, autumn quarter (LANZ) MWF 10

A32. Third-Year Russian.
3 units, winter quarter (LANZ) MWF 10

A33. Third-Year Russian.
3 units, spring quarter (LANZ) MWF 10

ZOOLOGY

CHARLES HENRY GILBERT, HAROLD HEATH, GEORGE CLINTON PRICE, Professors.
WALTER KENRICK FISHER, JOHN OTTERBEIN SNYDER, Associate Professors.
EDWIN CHAPIN STARKS, Assistant Professor.

(Courses 1 and 4 may be undertaken without previous preparation in Zoology.)

1. General Zoology.—A laboratory course involving the study of representatives of the principal groups of animals, accompanied by lectures on their structure and classification, and on the general laws of biology which they illustrate. The work given in the autumn quarter is planned especially for students majoring in biology and medicine. Not open to those who have had General Biology.
5 units, autumn and winter quarters (STARKS); spring quarter (HEATH); summer quarter (at Hopkins Marine Station) (FISHER, VAN WAGENEN)
autumn, 37; winter, 16; spring, 27; summer, 11

2. The Classification and Ecology of Marine Invertebrates.—The object of this course is to give the student the widest possible acquaint-

ance with the animals which live along shore and in the plankton of Monterey Bay—their classification, associations, distribution, and habits.

5 units, summer quarter (Hopkins Marine Station, Pacific Grove) (Fisher) Lab. MTWThF
summer, 11

4. The Vertebrates.—A general course in the classification of vertebrate animals, with studies in their habits and the geographical distribution of species. The course is largely devoted to birds. It includes field excursions, and observations of live animals in the laboratory.

5 units, spring quarter (Snyder) MTWThF 1:15–3:45
spring, 19

5. The Invertebrates.—This course, following course 1, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups.

5 units, autumn quarter (Heath) MTWThF
autumn, 14

6. Invertebrate Embryology.—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by courses 1 and 5.

3 units, winter quarter (Heath)
winter, 7

7. Advanced Work on Invertebrates.—The original investigation of problems connected with anatomy and embryology of invertebrates.

3 to 5 units, autumn, winter, and spring quarters (Heath) By arrangement
spring, 1

9. Research Work on Invertebrates.—Prosecution of special studies with reference to the classification, anatomy, and life history of invertebrates.

autumn, winter, spring, and summer quarters (at Hopkins Marine Station, Pacific Grove) (Fisher) By arrangement
summer, 4

10. Advanced Vertebrates.—Advanced studies in systematic vertebrate zoology, including practice in museum methods, in field observations, and in the collection and preparation of specimens with data. To be preceded by course 4.

3 to 5 units, spring quarter (Snyder) MTWThF

11. Comparative Anatomy of the Vertebrates.—A detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems.

5 units, winter quarter (Snyder); spring and summer quarters (Starks) MTWThF 1:15–4:15
winter, 27; spring, 15; summer, 2

12. Mammalian Anatomy.—For students who have had course 11 or its equivalent. To be preceded by course 11.

3 to 5 units, autumn quarter (Snyder) MTWThF 1:15–4:15
autumn, 13

13. Vertebrate Embryology.—The development of the chick through the first three days of incubation, and the later stages in the development of the mammal. (See also course 3 at the Hopkins Marine Station.)

5 units, winter and spring quarters (PRICE) MTWThF
winter, 24; spring, 29; summer, 4

14. Advanced Vertebrate Embryology.—Open to students who have had course 13, or its equivalent.

autumn quarter (PRICE) Units and hours to be arranged
autumn, 5

15. History of Zoology.—A course of lectures dealing with the great discoveries in the science of zoology, together with the lives of some of the more prominent zoologists. Open to students who have had 15 units of biological work. Two lectures weekly.

1 unit, autumn quarter (PRICE) TTh 8
autumn, 21

16. Primitive Chordates.—Amphioxus, the tunicates, and the lampreys. Open to students who have had courses 11 and 13.

5 units, autumn quarter (GILBERT) Forenoon hours by arrangement
autumn, 6

17. Fishes.—An examination of the larger groups of fishes and practical work in the discrimination of species. To be preceded by course 16.

5 units, winter quarter (GILBERT) Forenoon hours by arrangement

18. Advanced Ichthyology.—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work.

2 to 5 units, autumn, winter, and spring quarters (SNYDER) By arrangement
autumn, 1

19. Journal Club.—Open to seniors and graduate students.

4 units, autumn quarter (GILBERT) By arrangement
autumn, 2

20. Research.

2 units, spring quarter (GILBERT)
spring, 1

Major students must before graduation complete courses 1, 2, 4, 5, 6, 8, 11, 13, 16, 17, and 19, one advanced course in Zoology, and course 1 in Botany. Substitution of other courses is permitted in special cases.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

Students who look forward to the study of medicine may take Zoology for their major subject and receive the A. B. degree at the close of a four years' course which shall also contain the first year in medi-

cine. The following courses in Zoology will be required of such students: Zoology 1, 5 units; Invertebrate Morphology, 5 units; Comparative Anatomy of the Vertebrates, 5 units; Vertebrate Embryology, 5 units; Journal Club, 4 units.

The Teacher's Recommendation.—The department recommendation for the High School Teacher's Certificate in Zoology requires the completion of the following courses: Zoology as a major: Zoology 1 (General), 5 units; 2 or 5 (Invertebrates), 5 units; 4 (Vertebrates), 5 units; 6 (Invertebrate Embryology), 3 units; 11 (Comparative Anatomy of Vertebrates), 5 units; 13 (Vertebrate Embryology), 5 units; Entomology 3 (Insect Ecology), 5 units. Total, 38 units.

Zoology as a minor: Zoology 1, 2 or 4, 5, 11; Entomology 3. Total, 25 units.

The Zoological Collections

The Zoological Museum contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galápagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining States. The collection of marine invertebrates is rich in Pacific echinoderms and crustacea, and contains a good working nucleus in the other principal groups. The series of deep-sea forms is especially valuable.

Laboratory Fees.—$1 each quarter per unit of course.

GENERAL BIOLOGY

(See under Biology, p. 125)

1. Lectures.

3 units, autumn and *winter quarters (Burlingame, Doane, Heath, Martin, Peirce, Wilbur) (autumn) MWF 8; (winter) TThS 8

2. Lectures.

3 units, winter and *spring quarters (Abrams, Burlingame, Fisher, Heath, Martin, Smith, Terman, Vestal, Wilbur) MWF 8

a. Laboratory.

3 units, autumn, *winter, and *spring quarters (Vestal and Assistants) MWF 1:05–4:05, or TTh 1:05–4:05 and S 8–11

ENTOMOLOGY

Renne Wilbur Doane, Associate Professor.
Mary Isabel McCracken, Assistant Professor.
Gordon Floyd Ferris, Assistant Professor.

1a. Elementary Entomology.—An introduction to the study of entomology intended to give the student a general knowledge of the structure, development, and classification of the more important orders of insects. Laboratory work with occasional lectures. Open to all students.

5 units, autumn, *winter, *spring, and *summer quarters (McCracken, Ferris) Forenoons
autumn, 15; winter, 1; spring, 2; summer, 5

1b. Elementary Entomology.—A continuation of course 1*a* and preferably but not necessarily preceded by it. Includes a study of the minor orders of insects. Open to all students.

5 units, winter quarter (Ferris) Forenoons
winter, 11

2. Classification of Insects.—This course includes a study of insects in the field and the collection and classification of representatives of as many families as possible. The purpose of the course is to increase the student's knowledge of the insect fauna of this region and to acquaint him with the aims and methods of systematic work. Must be preceded by course 1*a* or 1*b*.

5 units, autumn and *spring quarters (McCracken, Ferris) By arrangement
autumn, 7; spring, 5

3. Morphology.—Open to students who have had courses 1*a* and 1*b*.

3 units, winter quarter (McCracken)

4. General Entomology and Insect Adaptations.—A course of lectures and demonstrations. Open to all students.

2 units, autumn quarter (Doane) [Not given in 1920–21]

5. Insects and Disease.—A discussion of the insects that cause or disseminate some of the diseases in man and the domestic animals. Lectures and demonstrations. Open to students having some previous training in biology.

2 units, winter quarter (Doane) TTh 9
winter, 41

6. Honey-bee and Apiculture.—Study of the honey-bee; its structure and activities and an introduction to practical bee-keeping through work in a small apiary.

3 units, spring and *summer quarters (McCracken) By arrangement
spring, 12; summer, 2

7. Economic Entomology: Coccidae (the Scale Insects).—A study of the classification, general biology, and economic relations of the scale insects, with particular attention to the more important injurious ones of the Pacific Coast. Field, laboratory, and bibliographic work, with occasional lectures.

3 units, winter quarter (Doane, Ferris) MWF afternoons
winter, 6; spring, 2

8. Technique.—A course primarily in elementary histological technique and including a limited study of the fundamental tissues, intended especially for Entomology and Zoology majors. For others than majors in these departments the course is adapted to the needs of the individual student. Open to all students.

2 to 5 units, winter and *spring quarters (FERRIS) By arrangement
autumn, 12; winter, 13; spring, 15

9. Economic Entomology: Forest Insects.—A study of the insect enemies of forest and shade trees. The course includes field, laboratory, and bibliographic work. Should be preceded by course 7.

3 units, autumn quarter (DOANE) MWF afternoons
autumn, 4

10. Economic Entomology: Orchard and Garden Insects.—A study of the principal injurious and beneficial insects of the orchard and garden. Includes field, laboratory, and bibliographic work.

3 units, spring quarter (DOANE) MWF afternoons
spring, 3

11. Economic Entomology: Principles and Practice.—A course of lectures relating to the development of economic entomology and the methods of controlling some of the more important insect pests.

2 units, spring quarter (DOANE) [Not given in 1920–21]

12. Principles of Nomenclature.—A series of lectures dealing with the principles of biological nomenclature and intended to meet the needs of students from any of the biological departments.

1 unit, spring quarter (FERRIS) [Not given in 1920–21]

13. Advanced Entomology.—Open only to upperclassmen who are prepared to do advanced economic, systematic, or biologic work. Laboratory and field work.

autumn, winter, spring, and summer quarters (DOANE, MCCRACKEN, FERRIS)
autumn, 2; winter, 6; spring, 4; summer, 1 By arrangement

14. Research.—Primarily for graduate students.

autumn, winter, spring, and summer quarters (DOANE, MCCRACKEN, FERRIS)
autumn, 2; spring, 2; summer, 3 By arrangement

15. Organic Evolution.

2 units, winter quarter; 1 unit, spring quarter (DOANE)
winter, 171; spring, 174

16. Animal Genetics.—Discussion and Demonstration of the principles of heredity underlying modern practices in improvement of animals. Two lectures and two units of laboratory work each week. The lectures may be taken without the laboratory work. (Not open to first- or second-year students.)

2 or 4 units, spring quarter (MCCRACKEN) Lec. TTh 11; Lab. by arrangement
spring, 20; summer, 1

16a. Heredity.

3 units, autumn and winter quarters (McCracken)
autumn, 1; winter, 1

Major students in Entomology must obtain before graduation forty-five units of credit in Entomology, and credit for course 1 in Zoology, and course 1 in Botany.

The Entomological Collections contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidae (scale insects), and valuable series of specimens from the Galápagos Islands, Samoa, and the Philippine Islands.

Laboratory Fees.—$2.50 per quarter for each laboratory course.

LECTURES AND DEBATES

Raymond Fred West Memorial Lectures

In 1910 Mr. and Mrs. Fred West, of Seattle, Washington, presented to the University, in memory of their son, Raymond Fred West, a student of the University who died before the completion of his college course, the sum of ten thousand dollars, to be held as a fund in perpetual trust, for the establishment of a lectureship on a plan similar to the Dudleian Lectures at Harvard University.

"It is our wish that such lectures shall not form part of the usual college or university course, nor shall they be delivered by any professor or instructor in active service in the institution. Such lecturer may be a clergyman or a layman, a member of any ecclesiastical organization, or of none, but he should be a man of the highest personal character and of superior intellectual endowment. He shall be chosen by the Faculty and the Board of Trustees of said University in such manner as the said Board of Trustees may determine, but the appointment in any case shall be made at least six months before the delivery of said lectures. . . . 'The course of lectures shall be known as the "Raymond Fred West Memorial Lectures on Immortality, Human Conduct, and Human Destiny".'"

The following general plan has been adopted by the University: The lectures are to be delivered in alternate years; the lecturer is to give at least three lectures; the lectures are to be published in book form within two years after delivery, the lecturer to have the option of publishing them himself, in which case the University will purchase a hundred copies, or of having the University publish them, in which case it will retain the copyright (in any case the manuscript of the lecturer is to be filed in the University archives); the honorarium to be decided in each case by the Board of Trustees, and unless otherwise ordered the entire earnings of the fund for the two years to be devoted to honorariums and to the purpose of publication; the lecturer is to be nominated by the President with the approval of the Advisory Board and the consent and ratification of the Board of Trustees

The sixth series of lectures was delivered by Dr. Henry Osborn Taylor, of New York City, May 4, 5, and 6, 1920. The general subject of the series was "The Freedom of the Human Mind in History."

THE PACIFIC COAST LEAGUE DEBATE

The championship of the Pacific Coast Debating League was contested by the University of Washington and Stanford University, on the Stanford Campus, the evening of March 4, the question being, "Resolved, That Congress Should Enact a Law Prohibiting Strikes in Essential Industries (Constitutionality granted)." Dr. Henry Barrett Learned, presided.

The affirmative speakers of the evening were Robert Binkley, '21, and Vernon Green, '21, of Stanford University. The negative was upheld by James Bailey and Robert McFarlane of the University of Washington. The judges, Justices Frank H. Kerrigan, and Warren Olney, Jr., of the Supreme Court, and Harris Weinstock, of Sacramento, awarded the decision to Stanford University.

The negative of the question was debated by Paul Erickson, '21, and David Tannenbaum, '22, of Stanford University, on the same evening, at the University of Oregon, where the decision was awarded to the latter university.

STANFORD-CALIFORNIA FRESHMAN DEBATE

The first of a series of annual simultaneous debating contests between the freshmen of the University of California and Stanford University was held April 8, the question being, "Resolved, That the Use of Injunctions in Labor Disputes Should Be Prohibited in the United States."

The affirmative was supported at Stanford by H. J. Durand, Bertram William Levit, and Mathew Oscar Tobriner of Stanford University, and the negative by L. B. Benas, H. B. Haas, and D. B. Miller of the University of California. Dr. David Starr Jordan presided. The judges, Professor Lee Emerson Bassett, Professor Walter Greenwood Beach, and Professor Marion Rice Kirkwood, rendered a decision in favor of the University of California.

At the University of California, Worth Wilson Caldwell, B. Emmet McCaffery, and Carl Sumner Shoup upheld the negative for Stanford University, and R. E. Cox, M. E. Nichols, and H. F. Selvin, the affirmative for the University of California. R. R. Irwin, of the California Freshman Debating Society, acted as chairman. Professor Thomas H. Reed, Professor Max Radin, and Instructor F. Fluegel, judged the debate in favor of California.

JOFFRE DEBATE

The Medaille Joffre, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of

French history and politics, is awarded to the student who, in the opinion of the judges, proves himself the best debater in a contest held for that purpose between Stanford University and the University of California.

The Twenty-seventh Annual Joffre Debate was held at Stanford University on the evening of April 2, the University of California being represented by Grace Dietz, '22, Clifton Hildebrand, '21, and Arthur Murphy, '23, and Stanford University by Vernon Green, '21, Wylie Kilpatrick, '23, and Laurence Martin, '21. The general question for the discussion was, "France and the Treaty of Versailles," and the specific question, selected by Professor Frederic A. Ogg, of the University of Wisconsin, and announced to the debaters two hours before the contest, "Resolved, That France Was Justified in Insisting Upon the Incorporation in the Treaty of Versailles of the Reparation and Restitution Clauses in Their Present Form."

The chairman of the evening was Professor Edwin A. Cottrell of the department of Political Science. The judges were the Hon. M. C. Sloss, justice of the supreme court; Mr. Seth Mann, attorney-at-law, and Professor Raymond G. Gettell, of Amherst College.

The Baron de Coubertin medal was awarded by the judges to Clifton Hildebrand of the University of California.

MUSEUM AND ART GALLERY

LELAND STANFORD JUNIOR MUSEUM

Pedro J. Lemos, Director.

In 1880, Leland Stanford Junior, then eleven years of age, accompanied his parents on a trip through Europe, and collected numerous mementos of the places visited. In 1883, on a second visit, he began to pursue this object more ambitiously, and finally with the idea of establishing a museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the various collections are mainly her gift to the Museum.

The collection made by Leland Stanford, Junior, between 1880 and 1884 has been placed in two rooms, and in one room his own arrangement is reproduced in detail. In the room adjoining are found mementos of his early life. These two rooms contain especially Egyptian bronzes, Tanagra figurines, Greek and Roman glass, armor, mosaics, Sèvres and Dresden ware, and the like.

The Stanford Memorial Room contains collections of personal belongings pertaining to the founders of the University. Added to these are collections connected with the early days of the University, views of buildings in construction, and details of the mosaics used in the Memorial Church.

The vestibule and upper corridor are devoted principally to copies of the old masters.

The Di Cesnola Collection contains five thousand pieces of Greek and Roman pottery and glass from the Island of Cyprus.

Another room contains the famous historical relic, "The Governor Stanford," the first locomotive used on the Central Pacific Railroad, in 1864.

The American Collection is made up of mound relics, Indian baskets, Acoma ware, utensils, Alaskan canoes, totem poles, etc. In this room is also a display of material of the stone age purchased by Mrs. Stanford in Denmark. The center case in this room contains practically all the implements extant of the old Mission Dolores, presented by Don Pablo Vasquez, whose father was the last major-domo of the Mission. Included in the Mission collection are some extremely rare relics of Father Junipero Serra and the Carmel and Santa Barbara Missions.

The Ikeda Chinese and Japanese collection, purchased by Mrs. Stanford in 1904, comprises rare art material from the Orient.

In the Chinese and Japanese room there is exhibited a collection of bronzes, arms, china, lacquer, cabinets, musical instruments, rich embroideries, and specimens of wood-carving, including the Imperial bedroom set, a marvel in wood-carving and inlaid work; also the famous de Long Collection of Japanese rarities.

The Japanese collection, purchased by Mrs. Stanford in 1902, consists of cloisonné, Satsuma, porcelain, embroideries, Buddhistic images and ivory carvings, and includes a large bronze Koro, over 150 years old. The Corean collection, the gift of Mr. Timothy Hopkins, contains costumes, household goods, cabinets, screens, etc.

One room contains the Anna Lathrop Hewes Collection of paintings, statuary, mosaic, etc. Ceramics collected by Mrs. Stanford include Sévres, Dresden, Royal Berlin, Persian, Pompadour crystal, Bohemian, and numerous other wares.

An adjoining room contains the collection of Venetian glassware, mirrors and mosaic art pieces, presented by Messrs. Salviati & Camerino, of Venice, Italy, and comprising almost every conceivable pattern.

The mosaic exhibit, which was made with the personal coöperation of Mr. Zampatto, shows the structural evolution of mosaic from the fusing of the glass to various finished pieces.

THOMAS WELTON STANFORD ART GALLERY

PEDRO J. LEMOS, Director.

The THOMAS WELTON STANFORD ART GALLERY is composed of four galleries designed for the exhibition of paintings and other works of art.

In the main galleries the collection of paintings donated by Thomas Welton Stanford is placed. Among these are pictures by Minderhout Hobbema, James Giles, R.S.A.; John Frederick Herring, Lienur, Van der Houten, Francis Snyders, W. J. Laidley, David Bates, John Yarley, Juliun M. Price, J. W. Ready, William Melby, James E. Meadows, Elijah Walton, F. G. S.; W. Henry, W. Koek-Koek, E. Wake Cook, T. R. Miles, Sr., John Glover, Herr Schnars-Alquist, Louis Buvelot, William Hart, William Shiels, R.S.A.; S. Bird, Patrick Nasmyth, Emil Bayard, Gerard Lairesse, C. Wimmer, Salvator Rosa, G. Koken, John Weenix, Bachman, Kobell, Jr., Charles Stuart, Heinrich Rasch, Melchoir Hondecooter, Marie Angelica Kaufman, Ten Kate, George Earl, Guardabassi, E. G. Lewis, and E. C. Curtiss.

The rear gallery has been planned for the exhibition of collections of paintings, etchings, and sculpture from eastern and foreign art centers. These exhibitions are announced from time to time as they are received.

DEGREES CONFERRED

[1]October 8, 1920; [2]January 7, 1921; [3]April 1, 1921; June 20, 1921.

BACHELOR OF ARTS

BACTERIOLOGY AND EXPERIMENTAL PATHOLOGY

[2]Marian Frances Brown
Virginia Parker Flippen
[2]Hermann Wilhelm Fritzschen
Anne M. Hall
[2]Hans Hartman
Mary Elizabeth Hewitt
Alberta Marx

BOTANY

Harry Alfred Borthwick
Helen Lois Dale
Hester Ruth Davis
Laura M. Getz
Paul Revere Hichborn
[2]Austin Jenison

CHEMISTRY

Alfred Carleton Ambler.
Edwin Dwight Barnett
[2]Lorenzo James Barton
Kinnison Swett Boynton
Leonard Eldon Carlsmith
[2]Wilfred Sterling Clark
[1]James Lindley Coman III
[3]Lawrence Harvey Cook
Roland Lewis Cundall
[3]Earl Frank Demond
Helen Frances Douglas
[3]Clarendon Bennett Eyer, Jr.
Edwin Lysle Gustus
Edgar Louvau Harker
Donuil Marshall Hillis
Thomas Patrician Hughes, Jr.
Kamehachi Thomas Iseri
Kenneth Hutton Johannsen
Gretchen Kaufman
[2]David Nathan Levy
[2]Ralph Frederick Lund
[1]Alanson Wood McDermoth.
James McLaren
Fred Adelbert Marshall.
Eibe Hinrich Meyer
Richard Aga Montague
[2]Harvey Newland
[3]William Newman, Jr.
[2]Nellie Elizabeth Presho
Kenneth Sinclair Ritchie
Marshall Keene Rouse
[3]Helen Elizabeth Sharp
[3]Charles Ward Starkey
Henry McKie Suttle
[2]Maurice Urdaneta de la Tour
Horace Edward Wheeler
Norma Elizabeth Wingood
[3]Hong Wu
Samuel Stephens Kistler

ECONOMICS

[3]Richard W. Arnett
[1]David Noble Barry, Jr.
Gerald Fremont Bartle
Carl Henry Bilger
[1]Percy Osborne Brewer
Elizabeth Brown
[3]Spencer Dodge Brown
[3]Marjorie Stowell Bryant
Charles Frederick Carlisle
[3]David Burton Carmichael
Harry Reynolds Carskadon
[3]William Sandow Carter
Kenneth Neil Clement
[2]Herbert Cerf Coblentz
[3]Washington Lewis Connolly
[1]Ralph Waldo Cooper
Frank Hubert Cowgill
[1]Clyde Julian Crobaugh
[2]Cachot Stephen Davis
Howard Earl Deems
Joseph Baldwin DeGolyer, Jr.
Melvin Edward Doyle
Alice Leland Eddy
Muriel Emma Edwards
Arthur John Engle
Donald Raymond Fairchild
Clifford McDermont Ford
Edwin Robert Freeman
[2]Tadao Fujimoto
[2]Richard Karl Gandy
Dorothy Marian George
David Garrison Ghrist
[1]Juliette Esther Gleason
Albert Vernon Green
George William Hall
Anne Elizabeth Ham
William Alexander Harper
[2]Melville David Harris
John James Heffernan
[3]Ellis Hirschfeld
[3]Leonard Shihlien Hsu
[1]Gordon Alden Hubbard
Harriet Hunt
[1]John Nace Jeffers
Howard Wight Jennings
Dorothy Johnston
Ruth Albertine Jones
[1]Loren John Kahle
[3]Gunki Kai
Maxwell Clark King
Thomas Madison Kleckner
[1]DeWitt Rogers Lee
Florence Belle Lormer
[3]Francis Towne McAnear
Elisabeth Mann McGee
[3]Harold Payne McGillivray
[1]Gordon Walter Mapes
M. Hawley Mertz
[3]Bertrand Charles Mills
Henry Franklin Mills
[1]Robert Bruce Montgomery
[1]Levi Bradley Morison
[1]Floyd W. Mosiman
Joseph William Mullarky
[3]Wayne Francis Mullin
[1]Otto Arno Nagel
[3]Norman Jess Nathanson
Margaret Lorain Noble
Takehiko Oyama
Warner Force Parker
[3]Muriel Pease
[2]Robert Forsythe Pelouze
Joseph Franklin Porter, Jr.
[3]Ralph Benton Prout
[3]Charles Elliott Purmort
[1]Harold Jordan Record
[3]Robert Henry Reid, Jr.
[3]Milton Louis Roberts
Merrill Wray Rowe
James Lowell Russell
[2]Baxter Rice Sharp
[3]Florence Madeline Smith

Edward James Sparling, Jr.
[2]Wade Moore Stamp
[1]John Robert Gaver Thompson
Jessee Emmett Thrash
[3]Mary Isabel Townley
[2]Warren Mortimer Turner
Harold Henry Venske
Fern Agatha Weaver
Alverda West
Minor White
Ross Eardly Woodward
[2]James Paul Woollomes

EDUCATION

[1]Walter Lewis Bachrodt
Ruby Jeanette Burford
[1]William Wilfred Cascaden
[2]William Meriam Coman
Martin Debenham
Gregorio Dimaano
[1]Marie Louise Field
[2]Walter Frederick Helbaumn
[1]William Jay Kircher
[2]Prudencio Langcauon
[3]Harry David Miller
[2]Carl Reiterman
John Faulds

EDUCATION (Graphic Art)

Chrysella Dunker
Katharine Virginia Morrison
Edna Thelma Petersen
Margaret Ellen Polhamus
[2]Emma Gladys Stelling
Marian Bernice Stewart

ENGINEERING

Civil Engineering

Frederick Lawson Adams
Lounsbury Slaght Fish
Norman Boynton Green
Melvin Collins Haley
[3]Llewellyn Gilmore Haskell
[3]William Henry Holmes
Harry Felts MacDonald
[3]Theodore Neuman
Clyde H. Scott
Keith Henry Swanholm
[3]Harold Coble Troxell
Willard Bruce Wells
Lyman Dwight Wilbur
Robert Lewis Wing

Mechanical Engineering

[2]Fred Page Andrews
[3]Stephen Henry Babcock, Jr.
Emery Edgar deBack
Philip Enoch Beckman
[2]James Clarke Berry
Montell Evelyn Bigler
[3]Milton Bulkley
Loyd Frank Carter
Philip Corriston Clark
[2]Domenick Dinapoli
Warren Doble
Robert Huston DuBois
Wienand Kelly Esgen
[3]Shungo Furui
[3]Leo Gregory Gianini
Lydik Siegumfeldt Jacobsen

Arthur George James
[3]Sidney Preston Johnson
Floyd Loren Kallam
[2]Harold L. McCarty
Vernon M. Marquis
Guido VanDusen Marx
[3]Fred Hodge Mugg
[2]Edwin Huff Pann
Fred Gordon Roberts
[3]John Henry Robinson, Jr.
[2]Herbert Nathan Royden, Jr.
Charles Swift, Jr.
Alfred Harwood Thayer
Frank Sadaji Utahara
[3]Lynn Albert Vietor
Ernest William Watson
Douglas McEldery Weller
[3]George Henry Whitney
[2]John Frederic Willcox
Arthur Lionel Williams
Garth Lylle Young.

ENGLISH

Sarah Virginia Apperson
[3]Darl MacLeod Boyle
[1]Lillian Harrison Brown
Esther Stone Cheesborough
Frances Lenore Cooper
Helen Hunt Daley
Vesta Irene Davis
Beatrice May Edmonds
[1]Gladys Green
[1]Milton Abel Hagen
[1]Charles Ito
[1]Robert Walker Kenny
Edith Bernice McDivitt
Gladys Georgiana Marriott
Mildred Leanor Maurer
Jeffie Louise Owen
Frances Marshman Payne
Ruth Edith Senior
Mary Norris Smith
Elna Cicelia Stanton
Rachel Nita Stillwell
Helen Marshall Stote
Josephine Adelaide Terrill
[1]Kendall Williams

ENGLISH (JOURNALISM)

[3]Paul Alfred Francis Walter, Jr.

ENTOMOLOGY

Therese Beckwith
[3]Sadie Ernestine Keen

GEOLOGY

[1]Arthur William Abraham
[3]Pedro Ignacio Aguerrevere
David McCullock Anderson
Karl Arleth
[1]George Lynn Boulware
[3]Harold Austin Brown
Henry Armin Chandler
[3]Henry Russell Clark
[2]Eldred Arthur Coates
Ralph David Copley
Dwight A. Dechman
[3]Charles Arthur Dobbel
Edward Loomis Elliott
[1]Bartlett Whitmer Gillespie

[3]Thomas Joseph Hamlyn
Francis Westerfeld Hertel
[1]Kenneth Hume Hunter
[3]William Darwin Kleinpell
Andrew Nicholls Mackenzie
[2]Edward Floyd Miller
Henry McRae Oliver
Lawrence Eugene Porter
Perry Buchanan Roberts, Jr.
[3]Fred Thomas Roseberry
Lawrence Milton Spencer
Horace Eldred Spurlock
[3]Max Steineke
Harry Phillip Stolz
[2]Warren Harrington Thralls

GERMANIC LANGUAGES

Maximo Frias Giménez
[1]John Vernon Goold

HISTORY

William Forbes Adams
Stephen Martin Barooshian
Helen Bentz
[1]Margaret Florence Burton
[1]Paul Hibbert Clyde
Laura Maud Davis
[3]Horace Elmer Ford
[3]Anna Margaret Gardner
Margaret Joanne Goodnow
[1]Edward Wentworth Harrington
[3]Edna Alice Harrison
[1]Jere Elwood Hurley
[3]Edward Harutune Jenanyan
[2]Eleanor Jean McCormick
Virginia Gardner McNaughton
Alice Kathryn Molloy
Ruth Arlene Olson
[1]Mabel Lucy Page
Elizabeth Allen Patton
[1]Gertrude Elizabeth Porter.
Pearl Sylva Pouppirt
John Perry Pritchett
[3]Cornelius Erwin Righter
[1]Marguerite Lennis Roberts
[2]John Randall Robinson
Elizabeth Strong Shamberger
Luis José deSouza
Nevada Loraine West

LATIN

Rose Gertrude Allegrini
Araxie Arpie Vartanian

MATHEMATICS

[1]Heinrich Wilhelm Brinkmann
[3]Dorothy Rose Crever
Carol Wheeler Reid
[2]Oma Lillian Retterath
Euphemia Rochet
Marjorie Elizabeth Sadler
Whittier Worthington Wallace
Esther Leah Weaver
Helen Younglove

PHILOSOPHY

[1]Harold C. Blote
George Marion Kyle
[1]Harrison Franklin Truscott

PHYSICS

[1]Frank Leslie Shaw

PHYSIOLOGY

[3]Reo Bliss Armitstead
Harold Light Averill
[2]Dale Joseph Butt
Russell Cooper Chilcote
Bernard Anthony Cody
[2]Lionel Arnold Jacoby
[3]Homer Eugene Marston
[3]Lewis Hampton Sanborn

POLITICAL SCIENCE

[1]Samuel Keith Davis
William Frederick Leiser
Floyd Lester McElroy
[1]Forster Rand Smith
Edward Langstrath Wood

PRE-CLINICAL SCIENCES

[2]Harry Vincent Baker
Charles Edward Harold Bates
George Dewey Brown
[1]Paul Raymond Brust
[3]Donald Vincent Burke
Esther Bridgman Clark
Charles Adolph Fernish
[3]Percy Beales Gallegos
Daniel Anthony Mahoney
Iride Ersilia Martini
[3]John Knox Morris, Jr.
Reed Miller Nesbit
Aubrey Gatliff Rawlins
Harry Alexander Somerfield, Jr.
Stuart Streshley.
[1]Harold Spencer Trueman
Herbert Sessions Wells

PRE-LEGAL CURRICULUM

John Henry Ankele, Jr.
Charles Edward Arnn
[3]Richard Talcott Ballinger
[2]Henry Edwin Bianchi
Edward Lee Hudson Bissinger
[1]Ossie Blücher
[2]Fred Laman Bonney
[3]Jerome Trimble Bowden
[2]Rae Best Carter
[3]James Alison Cary
[1]George Harold Clark, Jr.
[3]Crozier Cordell Culp
Herbert Adlington Davis
Arthur Coghlan Devlin
[1]Lloyd William Dinkelspiel
[3]Allen Lee Emery
Paul Ferdinand Erickson
[2]James Frank Galliano
Philip Hubbard Goddard
[3]Fred Sturtevant Herrington
Lloyd Gibbs Howard
[2]Russell Boyden Jarvis
[2]Hans Jensen Jepsen
Mortimer Allen Kline
James Thomas McMenamin
[3]Albert Venlow Mueller

[3]Clarence Raymond Niklason
James Petrini
Frederic Ross Pierce
[3]Edward Lorraine Rimpau
Karl Whitman Shlaudeman
John Edwin Crescent Simpson
[3]Matthew Cheney Simpson
Carl Victor Smith
[2]Coleman Everett Stewart
[2]John A. H. Sturgeon
[3]Gerald C. Thomas
[3]Arthur Irving Townsend
[2]John Arthur Tucker
Dorothy Gertrude Webster
Edwin Adams Wells
[2]Franklin Gordon West

PSYCHOLOGY

Anne Hardy
Melita Mary Hogg.
Evelyn Miller

ROMANIC LANGUAGES

[1]Janet Edith Amphlett
Florence Madeleine Bonhard
Ragnhild Marguerite Chevalier
Dorothy Ellen Donaldson
[1]Charles W. Eckhart
Caryl Lucile Elsey
Dorothy Hall
Mildred Marie Hutton
[1]Edith Mary James
Frances Virginia Mayberry
M. Ethel O'Keefe
Gertrude Logan Orcutt
Hester Elizabeth Proctor
Grace Martha Swithenbank
[2]Ernest Hall Templin
[1]John Parsons Weller
Edna May Wilbur

ZOOLOGY

[1]Ida Jopson
[1]Selma Ingrid Larson
[2]Heraclio Rosa Montalban
Ruth Avery Wescott

AT LARGE

Charles Ernest Loucks
[2]James Harold Thoburn

BACHELOR OF LAWS

[1]Loris Vaughn Cady, A. B.
[1]Ivores Roy Danis, A. B.
[1]John Gerald Driscoll, Jr., A. B.
[1]Clayton Orin Fenlason, A. B.
James Frank Galliano, A. B.
[1]Scott Lamar Norviel, A. B.
John Arthur Tucker, A. B.
Richard Eldon Wedekind, A. B.
[2]Horace Byington Wulff, A. B.

MASTER OF ARTS

BOTANY

[1]Harold Clark Hampton, A. B.
[2]Ruth Clara Hevener, A. B.

CHEMISTRY

Agnes Camille Anderson, A. B.
Dorothy Eloise Bernard, A. B.
Marguerite Eiskamp, A. B.
Adelaide Jameson, A. B
Harriet S. King, A. B.
Peter Victor Peterson, A. B.
Iowa State Teachers' College

ECONOMICS

Arthur Bruce Anthony, A. B.
Clyde Julian Crobaugh, A. B.
[1]Mervyn Crobaugh, A. B.
[1]Helen Frances Fletcher, A. B.
University of Southern California
[1]Clara Eulalie Howard, Ph. B
University of Chicago
Charles Hickman Titus, A. B.
[1]Clinton Fisk Wells, A. B.
Lucy Burton Winsor, A. B.
Vassar College

EDUCATION

Leonard Aho, A. B.
Walter Lewis Bachrodt, A. B.
Joseph Earl Burch, A. B.
University of Wyoming
John Hepburn Doebler, Jr., A. B.
[1]Lela Opal Gillan, A. B.
Nebraska Wesleyan University
[2]Charles Clifton Hurley, A. B.
[1]Pu Hwang, A. B.
[2]Edward Milton Jefferson, A. B.
[1]Maud Amanda Merrill, A. B.
Oberlin College
Laura L. Remer, Ph. B.
University of Chicago
William Robert Rutherford, A. B.
University of Oregon
Lexie Strachan, B. S.
University of Oregon
[1]Mildred Thomson, A. B.
Agnes Scott College
Miriam Wendle, A. B.
Wellesley College
[2]Ethel Dorothy Whitmire, A. B.
Jennie Benson Wyman, M. Sc.
University of New Zealand
Kwok Tsuen Yeung, A. B.
Canton Christian College

ENGLISH

[3]Genevieve Apgar, A. B.
University of Chicago

Willard Hallam Bonner, A. B.
College of the Pacific

Peter O. Bruland, A. B.
Luther College

Ellen MacKenzie Dodson, A. B.
University of Southern California

[3]Cora Lavina Hocker, A. B.
Earlham College

Gilbert Knipmeyer, A. B.

Verda Manners, A. B.

[3]Jessie Kirkland Paxton, A. B.

William Errle St. John, A. B.
University of Oregon

[3]Laura Virginia Schwartz, A. B.
College of the Pacific

Francis A. Threlkeld, A. B.
University of Mississippi

Ingegard Marie Uppman, A. B.

[1]Louina Margaret VanNorman, A.B.
University of Wisconsin

ENTOMOLOGY

[3]Frank Raymond Cole, A. B.
Pomona College

GERMANIC LANGUAGES

[1]Sigrid Matilda Petersen, A. B.
University of Nebraska

[1]Sophia Juliane Wolters, A. B.

GREEK

Hazel Dorothy Hansen, A. B.

HISTORY

Thelma Broadus, A. B.
Wells College

George Hurach Cloud, A. B.

Lulu L. McCanles, A. M.
University of Kansas

Alice McElin, A. B.
University of Chicago

Avis Middleton, A. B.
University of Kansas

Mary Esther Sprott, A. B.

[2]Russell Brennan Stevens, A. B.

MATHEMATICS

[2]Anita Marian Squires, A. B.

PHILOSOPHY

[1]Hugh Mackay Fletcher, A. B.
University of British Columbia

[3]John Goodwin Locke, A. B.

POLITICAL SCIENCE

Eleanor Mary Parsons, A. B.
Vassar College

ROMANIC LANGUAGES

George Lacombe
St. Patrick's Seminary
John Parsons Weller, A. B.
Dorothy Leeds Walsh, A. B.
Zelda Louise Wickersham, A. B.

ENGINEER

CHEMICAL ENGINEERING

Achille R. Albouze, A. B.
Clifford Courtney Bunds, A. B.
Philip Handby Jones, A. B.
Hubert Bernard Reilly, A. B.
Harrison Painter Smith, A. B.
[3]Charles Eldon White, A. B.
[3]Philip Samuel Williams, A. B.

ELECTRICAL ENGINEERING

Chi Chen, B. S.
Louisiana State University
Hubert Eziro Egami, A. B.
Franklin Fenelon Evenson, A. B.
Raymond Lewelling, A. B.
Verne L. Tindall, A. B.

MECHANICAL ENGINEERING

[3]Donald Kembel Dungan, A. B.
[3]Hugh Stewart, A. B.

MINING AND METALLURGY

[1]Carl Hugh Beal, A. B.
Herschel Livingston Driver, A. B.

JURIS DOCTOR

Walter Irving Ames, A. B.
[1]Allyn Herschel Barber, A. B.
[1]Leonard Stanford Barnes, A. B.
John Tracy Barton, A. B.
[2]William Albert Boekel, A. B.
University of Idaho
[1]Edward Winslow Brewer, Jr. A.B.
Harvard
[1]Floyd Sherman Bryant, A. B.
University of Oxford
[1]Newcomb Condee, A. B.
Albert Brooks Cox, A. B.
[1]Ben Vogel Curler, A. B.
Chauncey Homer Dunn, Jr., A. B.
[1]Thomas Lafayette Dyer, A. B.
Richard Frederick Kahle, A. B.
[2]Louis Meyer Lissner, A. B.
Herbert William Lombard, A. B.
University of Oregon
[3]Harold Carpenter Perry, A. B.
Jere Thomas Reynolds, A. B.
[2]William Otis Russell, A. B.
[1]Carroll John Single, A. B.
[2]Frederic Edward Supple, A. B.
James McOuat Wallace, A. B.
[3]Winifred Caldwell Whittier, A. B.

DOCTOR OF MEDICINE

Manuel Leal Azevedo, A. B.

George Henry Becker, A. B.
University of California

Harold John Cooper, A. B.

Leland Wadsworth Ellis, A. B.

Orrie E. Ghrist, A. B.

[1]Myrnie Ada Gifford, A. B.
Mount Holyoke

Arthur James Hood, A. B.
University of Nevada

Charles Alfred James, A. B.
University of California

Carol Edna Jameson, A. B.

J. Walter Jones, A. B.

Gunther W. Nagel, A. B.

Delta Ross Olsen, A. B.
University of California

Walter Ferris Pritchard, A. B.

Willoughby Park Richardson, A.B

Joseph Abraham Sampson, B. S.
University of California

[2]Dwight Emerson Shepardson, A.B.

Leonard Ramsay Thompson, B. S.
University of Washington

DOCTOR OF PHILOSOPHY

BOTANY, CHEMISTRY

L. J. M. Baas-Becking, M. S.
University of Utrecht

CHEMISTRY, EDUCATION

[2]Neil Preston Moore, A. M.

Norris Watson Rakestraw, A. M.

ENTOMOLOGY

K. Kunhi Wannan, A. M.
University of Madras

PHYSICS, MATHEMATICS

Frank Clark Hoyt, M. S.
Massachusetts Institute of Technology

FELLOWS AND SCHOLARS

1920–21

FELLOWS

Thomas Welton Stanford Fellow in Psychic Research

John Edgar Coover.....Stanford University
A. B., Stanford, 1904, A. M., 1905, Ph. D., 1912

Buckel Fellow in Education

Ethel Dorothy Whitmire.....San Jose
A. B., Stanford, 1907, A. M., 1921

Fellow in School Administration

Walter Lewis Bachrodt.....Palo Alto
A. B., Stanford, 1920, A. M., 1921

Fellow in Study of Superior Children

Jessie M. Chase.....Los Angeles
A. B., Stanford, 1919

University Fellows

Francis William Bergstrom (Chemistry).....Stanford University
A. B., Stanford, 1918, Engineer, 1919

Phyllis Maud Carbaugh (English).....Palo Alto
A. B., Vassar, 1907

Frank Raymond Cole (Entomology).....Redlands
A. B., Pomona, 1913; A. M., Stanford, 1921

John Gaylord Howes (History).....Palo Alto
A. B., Stanford, 1914, A. M., 1915

Giles Murrell Ruch (Education).....Eugene, Ore.
A. B., Oregon, 1914

Gertrude Van Wagenen (Zoology).....Ft. Worth, Tex.
A. B., Iowa, 1913, Ph. D., 1920

Marion Albert Zeitlin (French).....Los Angeles
A. B., Stanford, 1918, A. M., 1920

Teaching Fellows in Chemistry

William Richmond Barber.....Stanford University
A. B., Stanford, 1920

Marguerite Eiskamp .....Palo Alto
A. B., Stanford, 1920, A. M., 1921

Milan Wayne Garrett.....El Paso, Tex.
A. B., Stanford, 1920

Alanson Wood McDermoth.....Aberdeen, Wn.
A. B., Stanford, 1920

Sperry Fellow in Chemistry

Robert John Cross.....Mayfield
A. B., Stanford, 1911, A. M., 1920

Belgian Relief Commission

Harold Enos Crowe.....Long Beach
A. B., Stanford, 1917

George Card Kimber.....Palo Alto
A. B., Stanford, 1920

John Armstrong Sellards.....Champaign, Ill.
A. B., Illinois, 1912; A. M., Stanford, 1916

Frances Elizabeth Willis.....Redlands
A. B., Stanford, 1920

Hoover Fellows in Mining and Metallurgy

Charles Arthur Dobbel.....Palo Alto
A. B., Stanford, 1921

Harold Valby Dodd.....Los Angeles
A. B., Stanford, 1920

Herschel Livingston Driver.....Portland, Ore.
A. B., Stanford, 1919, Engineer, 1921

Research Fellow in Political Science

Amelia L. Hedges.

Research Fellow in Bacteriology

Edith Adeline Patterson.....San Jose
A. B., Stanford, 1919

GRADUATE SCHOLARS

Alumni Jordan Scholars in Medicine

Merlin Trevor Maynard.....San Jose
A. B., Stanford, 1920

Archibald Wilson Warnock.....Palo Alto
A. B., Stanford, 1918

GEORGE E. CROTHERS LAW SCHOLAR

Albert Wagner Leeds ..... Los Angeles
A. B., Stanford, 1920

CYRIL F. ELWELL SCHOLAR IN ELECTRICAL ENGINEERING

Raymond Lewelling ..... St. Helena
A. B., Stanford, 1920, Engineer, 1921

UNIVERSITY SCHOLARS

Leonard Aho ..... Astoria, Ore.
A. B., Stanford, 1920

Arthur Bruce Anthony ..... Sunnyvale
A. B., Stanford, 1919, A. M., 1920

William Balder Bachlund ..... Kingsburg
A. B., Stanford, 1920

Darl McLeod Boyle ..... Denver, Colo.
A. B., Stanford, 1921

Clifford Courtney Bunds ..... Santa Clara
A. B., Stanford, 1920, Engineer, 1921

Everett Carlson ..... Stanford University
A. B., Stanford, 1920

Rae Best Carter ..... Modesto
A. B., Stanford, 1921

Sigurd von Christierson ..... San Francisco
A. B., Stanford, 1917

George Hurach Cloud ..... Fresno
A. B., Stanford, 1919, A. M., 1921

James Morrille George ..... San Francisco
A. B., Brigham Young, 1912

Joseph Goldstein ..... San Francisco
A. B., Stanford, 1919

Hazel Dorothy Hansen ..... San Mateo
A. B., Stanford, 1920, A. M., 1921

Marion Iola Hedrick ..... Merced
A. B., Mills, 1920

Ivan Clyde Heron ..... Watsonville
A. B., Stanford, 1919

Newton Rumell Jackson ..... Provo, Utah
A. B., Brigham Young, 1917

Frank Reed Johnston ..... San Jose
A. B., Stanford, 1917

Richard Frederick Kahle ..... San Diego
A. B., Stanford, 1918, J. D., 1921

Paul Francis Kerr ..... San Jacinto
B. S., Occidental, 1919

Charles Ashton Love, Jr. ..... Atascadero
A. B., Doane, 1914

Josephus P. Mandl ..... Phoenix, Ariz.
A. B., Stanford, 1920

Ruth A. Nethercut ..... Lake Geneva, Wis.
A. B., Stanford, 1919

Eleanor Mary Parsons ..... Wellesley Hills, Mass.
A. B., Vassar, 1920; A. M., Stanford, 1921

Mary Petty ..... Madera
A. B., Mills, 1920

Hubert Bernard Reilly ..... Portland, Ore.
A. B., Stanford, 1918, Engineer, 1921

Harrison Painter Smith ..... Los Angeles
A. B., Stanford, 1920, Engineer, 1921

John Paul Sweeney ..... Phoenix, Ariz.
A. B., Stanford, 1920

Ernest Hall Templin ..... Rupert, Idaho
A. B., Stanford, 1921

Donald Bertrand Tresidder ..... San Francisco
A. B., Stanford, 1919

Atwell George Westwick ..... Stanford University
A. B., Stanford, 1920

Zelda Louise Wickersham ..... Chicago, Ill.
A. B., Stanford, 1920, A. M., 1921

UNDERGRADUATE SCHOLARS

The W. J. Dickey Scholars

Paul Ferdinand Erickson ..... Kingsburg
Algot Julius Peterson ..... Kingsburg

Memorial Scholar

James Cornelius Gilbert ..... Spokane, Wn.

Brodie G. Higley Scholar

Stephen Martin Barooshian ..... Fresno

Mrs. McDowell Roble Club Scholar

Muriel Emma Edwards ..... Wallace, Idaho

Bertha Hyde Braly Scholar

Mary Lida Cornes ..... San Jose

Wilmer J. Gross Scholar

Dell Theodore Lundquist ..... Middletown

Dorothy Metz Scholar

Marjorie Ferguson Wells ..... Pasadena

GERTRUDE GARDINER SCHOLAR

Gretchen Kaufman ..... Bellingham, Wn.

ERNEST A. LOVE SCHOLAR

Cecil Robert Brolyer ..... Stanford University

MARCELLE HENRIETTE ROUILLER SCHOLARS

Richard R. Crandall ..... Hollywood
Virginia Belle Lowers ..... Los Angeles

JOHN MAXSON STILLMAN SCHOLAR

Alan Campbell Richardson ..... Washington, D. C.

WILLIAM IRVIN WEAVER SCHOLAR

Earle Frank Demond ..... Los Angeles

HIRAM C. FISK SCHOLAR

Anna Frances Ramsey ..... Stanford University

IRA S. LILLICK SCHOLAR

Albert Brooks Cox ..... Palo Alto

MRS. IRA S. LILLICK SCHOLAR

Everett Seymour Layman ..... Reno, Nev.

PAYSON J. TREAT SCHOLAR

Louise Amidon Cannon ..... Palo Alto

STANFORD SCHOLARS

Mary Katherine Chase ..... Stanford University
Helen Lois Dale ..... Palo Alto
Isabel Dorothy Elfving ..... Modesto
James Cornelius Gilbert ..... Spokane, Wn.
Charlotte Marian Glenn ..... Los Angeles
Daniel Louis Goodman ..... Yakima, Wn.
Bernard Francis Haley ..... Los Angeles
Lydik Siegumfeldt Jacobsen ..... Napa
Kenneth K. Kelley ..... Salt Lake City, Utah
Virginia Belle Lowers ..... Los Angeles
Millard Samuel Rosenblatt ..... Portland, Ore.
Elizabeth Brewer Spilman ..... Palo Alto
Marian Abigail Trist ..... Palo Alto
Samuel Edson Vaughn ..... Santa Barbara
Florence Oliver Whittier ..... Menlo Park

STUDENTS

Name; home residence; major subject; status; University residence; post-office. Post-office in all cases *Stanford University* except where University residence is followed by initial letter of town ('p' indicates *Palo Alto* post-office; 'Mayfield-m,' *Mayfield* post-office, etc.). Street address *Palo Alto* or *Campus* unless otherwise named.

Status.—gr., graduate student; sp., special student. The superior figure [1] indicates registration for the autumn quarter only; [2] indicates winter quarter only; [3] indicates spring quarter only; [4] indicates summer quarter only; [5] indicates attendance for all four quarters; omission of superior figure indicates attendance for autumn, winter, and spring quarters; [12] indicates autumn and winter quarters only; [23] indicates winter and spring quarters only; [13] indicates autumn and spring quarters only; and so on. The asterisk (*) indicates registration *in absentia*. (Phys., Physics; Phyl., Physiology.)

[1]Abbott, Emma F.	Sedro-Woolley, Wn.	LD 15+2	380 Roble
[4]Abeloe, Jessie P.	Salinas	LD	326 Roble
[4]de Aberle, Sophie	Pacific Grove	Pre-Med.	Pacific Grove-pg
[12]Abrahamson, Jack Hugo	San Francisco	Hist. 34–44	560 Encina
[4]Abrams, Delos, Jr.	Pasadena	Chem. ‡	32 Encina
[5]Abrams, Harry Wm.	Stanford Univ.	Geol.sp. 44·107+50	ThetaDeltaChi
[1]Abramson, Eino John	Ft. Bragg	LD	61 Sequoia
Acker, Bennett Nicholas	Oakland	Law 14–57	423 Encina
[12]Adams, Eugene Robt.	Mountain View	M. E. 96–17	Alpha Kappa L'bda
Adams, Frederick Lawson A. B., Stanford, 1921	Sacramento	C.E. 18·176+68	PhiGammaDelta
[12]Adams, Raymond E.	Maple Hill, Kan.	LD 14–24	Kappa Alpha
[5]Adams, William Bryan	San Jose	Econ. 50·120+71	DeltaTauDelta
Adams, William Forbes A. B., Stanford, 1921	Stanford Univ.	Hist. 89·111+166	7 Cabrillo
[1]Adrian, Elaine Yolande	SantaBarbara	Engl. 87+80	Alpha Omicron Pi
[12]Aguerrevere, P. I. A. B., Stanford, 1921	Caracas,Venezuela	Geol. 30·151+231	Theta Chi
[5]Aguerrevere, S.	Caracas, Venezuela	LD 38+31	Theta Chi
[12]Agunod, Nemesio L.	Cortes, P.I.	LD 12·33+54	365 Channing
Aho, Leonard A. B., Stanford, 1921	Astoria, Ore.	Educ. gr.	704 Bryant-p
[5]Aitken, Harry Christie	Berkeley	Pre-Clin. 135·31–3	435Hamilt'n-p
[4]Aitken, William E.	Cumberland, Eng.	LD	Menlo Park-mp
Alabaster, Lewis Plimpton	Riverside	LD 45+50	Beta Theta Pi
[1]Alberson, Vida Leola	Palo Alto	Econ. 33–20	1027 Emerson-p
Albrecht, Helmuth W.	Gt. Falls, Mont.	LD 32–14	636 Gilman
[4]Alderson, William C. A. B., Willamette, 1889	Portland, Ore.	Educ. gr.	675 Channing-p
[1]Alejano, Delfin P.	Ilog, Neg. Occ.,P.I.	C.E. 56–33	365 Channing-p
Alexander, Herbert Bloom	San Jose	Hist. 81·49+84	358 Encina

[5]Alexander, Ralston Carroll	Salinas	Ed. G. A. 169+13	Theta Chi
Alexander, Walter Stevens	Los Angeles	M. E. 47·37–2	Beta Theta Pi
[2]Algeo, Kathryn Oudry	Alhambra	Econ. 80+26	Chi Omega
Allegrini, Rita Adelaide	Santa Clara	Engl. 91·46+51	1895 Cathr'e,SC-sc
Allegrini, Rose Gertrude	Santa Clara	Lat. 45·139+94	1895 Cathr'e,SC-sc
A. B., Stanford, 1921			
Allen, Carnot R.	San Antonio, Tex.	Econ. 140+155	509 Encina
[124]Allen, Ernest Wm.	BallGround, Ga.	Hist. sp. 22+15	Alvarado Hall
[4]Allen, Hollis P.	Pomona	Educ. gr.	Stanford Univ.
A. B., Pomona, 1918			
[4]Allen, Laura C.	Tucson, Ariz.	Engl. gr.	363 Roble
A. B., Univ. of Mexico, 1916			
[3]Allen, Lloyd Jeffreys	Palo Alto	LD	909 Hamilton-p
[4]Allen, Martha Lucille	Pasadena	Ed. G. A. 58·121+60	Roble
[5]Allen, Neil R.	Palo Alto	Law gr.	821 Bryant-p
A. B., Stanford, 1918			
[5]Allen, Raymond E.	Riverton, Wyo.	Econ. 100·39–11	AlphaDeltaPhi
Allen, Raymond Jackson	Riverside	Econ.-Law 128+66	304 Encina
[5]Allexsaht, William John	Weiser, Ida.	Phyl.-Med. 73·89+39	9 Sequoia
Alling, Eric Lattimore	Rochester, N.Y.	Chem. gr.	Kingscote
B. S., Princeton, 1915; M. D., Columbia, 1915			
Allmand, John T.	HighlandPark,Mich.	LD 45+20	121 Encina
[1]Allyn, Lawrence G.	Oakland	Econ. 36+35	27 Sequoia
[4]Almack, John C.	Eugene, Ore.	Educ. gr.	Encina
B. S., Univ. of Oregon, 1920			
Alvord, Benjamin, Jr.	San Francisco	C.E. 101–2	513 Encina
Amberg, Gustav Adolph	San Francisco	C.E. 102+17	403 Encina
Ambler, Alfred Carleton	Pasadena	Chem. 128·52+32	137 Encina
A. B., Stanford, 1921			
[13]Ames, Walter Irving	Ontario	Law gr.	Stanford Union
A. B., Stanford, 1920, J. D., 1921			
Andersen, Agnes C.	Spokane, Wn.	Chem. gr.	232 Roble
A. B., Stanford, 1920, A. M., 1921			
Andersen, Emelie E.	Spokane, Wn.	Med. gr.	263 Roble
A. B., Stanford, 1919			
[23]Anderson, David McC.	Pasadena	Geol. 70·107+17	Theta Delta Chi
A. B., Stanford, 1921			
[5]Anderson, Doris Evelyn	Everett, Wn.	Bact. 81·81+47	GammaPhiBeta
[5]Anderson,EarlCanute	Grantsburg,Wis.	Econ. 135·41+17	Chi Psi
[1]Anderson, EleanorCalhoun	LosAngeles	Econ. 70+21	KappaKappaGamma
Anderson, Frederick Leroy	Forestville	Chem. 10·70+10	Sigma Nu
[4]Anderson, George I.	Oakland	LD	357 Encina
[5]Anderson, Henry Stow	Mayfield	Econ.39·92+54	CollegeTerrace-m
[4]Anderson, Lois Meada	Salinas	LD	Roble

[4]Anderson, Ralph E.	Kingsburg	LD	112 Encina
Anderson,ShermanCowan	Winslow,Ariz.	Pol.S. 90+132	19 Encina
Andrews, Allen Hastings	Palo Alto	Engl. 20·116+98	315 Encina
[12]Andrews, Amy Violet	Los Angeles	Econ.78+48	KappaKappaGamma
[4]Andrews, Bertrand A.	Pasadena	LD	Phi Delta Theta
[4]Andrews, Clara D.	Waterman	Educ. gr.	261 Roble
B. S., Ore. Agri. Coll., 1895			
[4]Andrews, Esther C.	Whittier	Ger. gr.	119 Webster–p
A. B., Stanford, 1906			
[4]Andrews, Helen	San Luis Obispo	LD	115 Roble
[24]Andrus, Harry Jerome	Dillon, Mont.	LD 10–7	114 Encina
[4]Andrus, Orrin Edgar	TroyCenter,Wis.	LD	308 Encina
Anglim, James Harold	Represa	Econ. 92+74	407 Encina
Ankele,CordesWesterfeld	San Francisco	Med. gr.	1670 Clay, SF-sf
A. B., Stanford, 1919			
Ankele, John Henry, Jr.	San Francisco	Law 180+73	Chi Psi
A. B., Stanford, 1921			
Anthony, Arthur Bruce	Sunnyvale	Econ. gr.	Sunnyvale-s
A. B., Stanford, 1919, A. M., 1921			
Anthony, Donald Elliott	Sunnyvale	Econ. 141+92	Sunnyvale-s
[23]d'Antonio, Mary	Cupertino	LD 17–19	Cupertino-c
Anzini, Daniel Irwin	Mountain View	M.E. 10·90+98	MountainView-mv
[1]Anzini, Henry Victor	San Jose	LD sp.	450 N. 5th, SJ-sj
Apgar, Genevieve	St. Louis, Mo.	Engl. gr.	Madroño
A. B., Univ. of Chicago, 1910, A. M., Stanford, 1921			
Apperson, Sarah V.	Lincoln, Neb.	Engl. 135·55+12	Kingscote
A. B., Stanford, 1921			
Applewhite, Samuel P., Jr.	Douglas,Ariz.	Geol. 95+78	636 Gilman
[4]Archer, Lester W.	Dinuba	LD	347 Encina
Ardell, Robert Bernard	San Francisco	Law 119+21	218 Encina
[3]Argall, Marsden Spratton	Milpitas	LD ‡ 7–2	Milpitas-m
[234]Argo, Arnold Clarence	Palo Alto	Educ. gr.	627 Kingsley-p
B. S., Univ. of Wash., 1912			
Arleth, Karl	Long Beach	Geol. 45·121+48	Theta Xi
A. B., Stanford, 1921			
[4]Armanini, Lawrence A.	Mountain View	LD	Mountain View-mv
[5]Armitstead, Reo Bliss	San Francisco	Med. gr.	326 Encina
A. B., Stanford, 1921			
[4]Armstrong, Alta	Portland, Ore.	Educ. gr.	349 Roble
A. B., Reed Coll., 1916			
[5]Armstrong,RobertHenry	Phoenix,Ariz.	Law 162–10	Delta Chi
[1]Arnett, Richard W.	Los Angeles	Econ. 181+42	Encina
A. B., Stanford, 1921			
Arnn, Charles Edward	Cairo, Ill.	Law 110·73+29	147 Emerson-p
A. B., Stanford, 1921			

[12]Arnold, Edward Garratt — San Jose — M.E. 44+21 — 348 Encina
[1]Arnold, Edward Willingham — Riverside — Law. gr. — Kappa Alpha
A. B., Stanford, 1919
[5]Arnold, Ralph John — Palo Alto — Pre-Med. ‡ 31–11 — 616 Forest-p
[1]Arntzen, Albert M. — Parkland, Wn. — Econ. 67·16+5 — 64 Sequoia
[12]Arthur, James Leland — Clovis — LD 29–24 — 32 Encina
[23]Ashley, Charles Clarke — Palo Alto — LD 22–17 — 611 Waverley-p
[5]Ashley, Hammond — Palo Alto — LD 44+53 — AlphaKappaLambda
Ashley, Willa — Palo Alto — Fr. 152+180 — 611 Waverley-p
[24]Ashworth, William — Santa Barbara — Engl. gr. — Menlo Park-mp
A. B., Dartmouth, 1909
Aspinwall, Harold McK. — Brooks, Ore. — Chem. 46·95+51 — 318 Encina
[5]Aten, Imogen — El Centro — Econ. 20·113+43 — Chi Omega
[4]Atkin, Henry R. — Provo, Utah — Law gr. — 220 Emerson-p
A. B., Brigham Young Coll., 1916, A. M., Columbia, 1917
Atkinson, Francis Decker — La Jolla — Chem. 50·99+87 — 365 Channing-p
Atwater, Clement Finley — Hollywood — LD 36–7 — Alpha Tau Omega
Atwill, Edward Robert — San Gabriel — LD 46+27 — Delta Upsilon
Atwood, David Stoddard — Los Angeles — M. E. 36·84+97 — AlphaTauOmega
[5]Aubert, Lloyd Lees — San Mateo — Geol. 32·126+101 — Phi Delta Theta
[4]Augustine, Lydia A. — Los Angeles — Fr. ‡ — Roble
Austin, Arthur — Oakland — Econ. 71+23 — Delta Tau Delta
[5]Austin, Carl R. — Modesto — Econ. 85+0 — 333 Encina
Averill, Harold Light — Portland, Ore. — Phyl-Med. 180+64 — 316 Encina
A. B., Stanford, 1921
Avery, Robert Barnett — Long Beach — LD 18·45+24 — Phi Delta Theta
[4]Avilla, Leonard R. — Hughson — LD — 128 Encina
[4]Ayer, J. Warren — Phoenix, Ariz. — Educ. gr. — Palo Alto
A. B., Otterbein Coll., 1907
[5]Ayres, Elliott Howard — Palo Alto — Econ. sp. 32+28 — 603 Waverley-p
[4]Ayres, Helen M. — Los Gatos — Chem. gr. — 603 Waverley-p
A. B., Mills Coll., 1918
[5]Azevedo, John Anthony — San Francisco — Med. gr. — Lane Hospital, SF-sf
A. B., Stanford, 1920, M. D., 1921
[12]Babcock, S. H., Jr. — SaltLakeCity,Utah — M.E. 180+59 — Phi Kappa Psi
A. B., Stanford, 1921
[12]Bachman, F. Wm. — New York, N. Y. — Ger. 60·70+95 — 46 Sequoia
Bachrodt, Walter Lewis — Palo Alto — Educ. gr. — 826 Waverley-p
A. B., Stanford, 1920, A. M., 1921
Bacigalupi, Rimo Charles — SanFrancisco — Engl. 8·80+134 — R.D.Bx56a,RC-rc
de Back, Emery Edgar — Watsonville — M.E. 8·175+85 — 427 Webster-p
A. B., Stanford, 1921
de Back, Norman John — San Francisco — LD 41–4 — Delta Tau Delta
Backlund, Wm. Balder — Kingsburg — Law gr. — 303 Encina
A. B., Stanford, 1920

Bacon, Bruce	San Jose	Econ. sp. 45·36+4	269 S.12,SJ-sj
[1]Bader, Newton Charles A. B., University of Oregon, 1920	Eugene, Ore.	Educ. gr.	11 Salvatierra
Bader, Walter Alfred	Aromas	Zool. 68·65–21	538 Cowper-p
Badham, Byron Jack, Jr.	Los Angeles	LD 47+40	349 Encina
Baer, Sylvan	Hoquiam, Wn.	Chem. 139+56	308 Encina
Bailard, Beverly Benjamin	Carpinteria	LD 4·50+71	307 Encina
Bailard, Carey Gwyn	Carpinteria	Econ. 134+109	Pi Beta Phi
[2]Bailey, Francis Paul	Hillsboro, Ore.	Phyl. 103+16	Phi Kappa Psi
Bailey, Harry H.	Mayfield	C.E. sp. 10+5	209 Stanford, M-m
Bailey, Marguerite Doris	Red Bluff	Ed. G. A. 95+60	AlphaOmicronPi
Bailey, Thomas Andrew	Santa Clara	LD 46+88	103 N.Bascome,SC-sc
Bailie, Everett Graves	Los Angeles	LD 46+38	111 Encina
Baker, Charles C.	Lewiston, Ida.	LD 28–8	Sigma Chi
Baker, George Harold	Santa Ana	LD 38+6	Delta Upsilon
Baker, Harry Vincent A. B., Stanford, 1921	Grimes	Med. gr.	333 Encina
[4]Baker, Ida May	San Jose	Educ. ‡ 13+16	Roble
Balcomb, Violet May	Palo Alto	LD 14+24	220 Emerson-p
[4]Baldwin, Robert D. A. B., Princeton, 1913, A. M., Columbia, 1916	Cheney, Wn.	Educ. gr.	834 Kipling-p
[4]Ballanfonte, Elizabeth	Kerto	Engl. ‡	167 Roble
[4]Ballard, Modrel M. A. B., Baylor University, 1920	Waco, Tex.	Span. gr.	124 Encina
[12]Ballinger, Richard Talcott A. B., Stanford, 1921	Seattle,Wn.	Law 181+78	Zeta Psi
Balmat, Cecil Hastings	Spokane, Wn.	M.E. 77+151	302 Encina
[4]Bannon, Thomas J.	Los Angeles	LD	328 Encina
Baptie, Albert Sheldon	Bakersfield	Geol. 37–4	Sigma Nu
Baptie, Charles Christopher	Bakersfield	LD 33+3	Sigma Nu
[23]Barber, Wm. Richmond A. B., Stanford, 1920	StanfordUniv.	Chem. gr.	341 Columbia, M
[4]Barby, May Grace	Knowles, Okla.	LD	354 Roble
[5]Barby, Otto Carl	Knowles, Okla.	LD 41+29	130 Encina
Barby, Ralph Earl	Knowles, Okla.	LD 34–8	130 Encina
[12]Barclay, Maisie Martin	Ontario	LD 15·25+4	624 University-p
Barham, Leonard Edwin	Princeton	LD 35–12	Theta Delta Chi
Barker, Richard Hindry	Palo Alto	Engl. 133+240	633 Hamilton-p
Barkway, Emily Wilhelmina A. B., Stanford, 1920	Mt. View	Ed. G. A. gr.	Sigma Kappa
[4]Barlow, Fred Walter	Hollywood	LD	19 Encina
[1]Barnard, Leonard Bryan	Niles	Phyl.-Med. 18·189+59	Theta Chi
Barnes, Edwin Rexford	Ceres	Econ. 4·95+73	21 Sequoia

[1]Barnes, Glen Charles	Los Angeles	LD	29 Encina
Barnes, Robert Leighton	Duluth, Minn.	LD 46+17	Alpha Delta Phi
Barnett, Charles Wentworth	SantaRosa	Chem. 98+162	8 Mirada
Barnett, Edwin Dwight	Santa Rosa	Chem. 5·184+15	8 Mirada
A. B., Stanford, 1921			
Barnett, Eric Gordon	Lower Lake	LD 37+9	Menlo Heights
[1]Barney, Marion David	Cowley, Wyo.	Econ. sp. 21+10	Alvarado Hall
Barnhart, Harriet Glines	San Diego	Hist. 147+102	Pi Beta Phi
[1]Baron, Albert Samuel	San Francisco	M.E. 43·15+12	Phi Kappa Psi
Barooshian, Stephen Martin	Fresno	Hist. 96·95+126	Menlo Park
A. B., Stanford, 1921			
[1]Barrette, Walter S.	SaltLakeCity,Utah	Law 88+80	Phi Kappa Sigma
Barricklow, Lulu Eljah	Turlock	Engl. 95+91	Gamma Phi Beta
[4]Barry, Raymond W.	Santa Barbara	Engl. gr.	357 Lincoln-p
A. B., Ohio Wesleyan University, 1915, A. M., Stanford, 1916			
Bartle, Gerald Fremont	Monrovia	Econ. 186+124	Theta Chi
A. B., Stanford, 1921			
Barton, John Tracy	Milton, Ore.	Law gr.	Theta Chi
A. B., Stanford, 1919, J. D., 1921			
Barton, Roberta M.	ColoradoSpgs.,Colo.	Fr. 10·141+171	324 Roble
[1]Bartow, Harvey Ray	Long Beach	Chem. 35·49+72	557 Encina
[5]Bassett, Thomas E.	Palo Alto	Geol.sp. 68·128+37	332Channing-p
[23]Batchelder, Kenneth C.	Tacoma,Wn.	LD 31+29	64 Sequoia
Bateman, Albert John	Monrovia	C. E. 88+80	32 Encina
[234]Bates, Charles E. H.	Alameda	Pre-Clin. 135·56+8	11 Salvatierra
A. B., Stanford, 1921			
[1]Bates, Marie Alice	Palo Alto	Fr.	531 Cowper-p
[4]Baugh, Ally Ray	Monterey	LD	Encina
[4]Baughman, Imo Pearl	Los Angeles	Chem. gr.	163 Roble
A. B., Stanford, 1918, A. M., 1919			
Baum, Edwin Kennith	Norfolk, Neb.	M.E. 93·51+51	321 Encina
A. B., Kansas Wesleyan University, 1918			
[4]Baumert, Frances	Long Beach	Engl. gr.	232 Roble
[4]Baun, Ruth	Yuba City	Educ.	256 Roble
Bayley, Arnold Blakeman	Los Angeles	Econ. 68–7	27 Sequoia
[234]Baylis, Edythe Goodwin	Los Angeles	LD 29+13	311 Roble
[5]Beach, Walter Edwards	Palo Alto	Econ. 73·49+80	540 University-p
[23]Bean, James	San Jose	M.E. 82·81+6	755University,SJ-sj
[4]Beardsley, Charles E.	Los Angeles	LD	119 Encina
Beardsley, Frank Dey	Stanford Univ.	M.E. 45·47+86	86 Kingscote
[124]Beardsley, John Wyman	Los Angeles	LD 9–11	247 Encina
Beattie,AugustusCanfield	Portland,Ore.	Phyl. 146+140	Kappa Sigma
[5]Beaver, Harold Jay	Los Angeles	Med. gr.	41 Encina
B. S., Washington State College, 1916			

[4]Beck, Charles Henry	Los Angeles	LD	208 Encina
[4]Beck, Dorothy	Berkeley	Med. gr.	1636 Josephine-b
A. B., University of California, 1920			
Becker, Arthur C. Wm.	Springerville, Ariz.	LD 39+7	Alpha Kappa Lambda
Becker, Hugo Ernest	Springerville, Ariz.	M.E. 84·78+3	Alpha Kappa Lambda
[12]Becker, Hugo Herman	El Paso, Texas	Chem. 51·137–2	223 Encina
[4]Beckman, Ann Oakes	Monrovia	Econ.	Roble
Beckman, Philip Enoch	San Francisco	M.E. 182+206	229 Encina
A. B., Stanford, 1921			
Beckwith, Therese	Los Gatos	Ent. 53·127+57	Gamma Phi Beta
A. B., Stanford, 1921			
Beede, Arthur Huntington	Whittier	Med. gr.	281 Addison-p
B. S., Occidental College, 1920			
[4]Beers, Jewel Alice	Los Angeles	Educ. ‡	358 Roble
[5]Behneman, Harold M. F.	Oakland	Pre-Med. gr.	666 Tennyson-p
A. B., University of California, 1920			
[1]Belcher, Dorothy Kathryn	Pomona	Psych. 30–1	149 Roble
[4]Belcher, Ruth Alice	Pomona	LD	Cowper Court Apts.-p
[4]Belk, Norrell Carlton	Waco, Tex.	Hist. gr.	621 High, Box 668-p
A. B., Baylor University, 1920			
[23]Bell, Arthur Thomas	Pasadena	Econ. 52+6	32 Encina
[3]Bell, Muriel Frances	Palo Alto	Fr. 18·46+10	532 Homer-p
[12]Beltz, S. Stewart	Pasadena	Econ. 24–7	Zeta Psi
[4]Bennett, Guy M.	Hollywood	LD	307 Encina
[234]Bennett, Vaughn W.	Salt Lake City, Utah	LD 30+20	14 Sequoia
[4]Bennetts, Francis L., Jr.	Mt. View	Engl. ‡	Mt. View-mv
[4]Bennetts, Frederick A.	Mt. View	LD	Mt. View-mv
Benninger, Charles J., Jr.	San Francisco	LD 41+15	Delta Tau Delta
[4]Benson, Cecil R.	Santa Clara	LD	Santa Clara-sc
[12]Benson, Gilbert Thereon	Oswego, Ore.	Engl. 48·71+108	Hotel Palo Alto-p
[3]Bentley, Charis Eugenia	Okla City, Okla.	LD 14+14	Bx 645, Menlo Park-mp
Bentley, Elizabeth Noel	Menlo Park	Fr. 59+79	Laurel Ave., MP-mp
[23]Bentley, Ruth Mary	Palo Alto	Econ. 19·25+30	635 Homer-p
Bentz, Helen	Pasadena	Hist. 180+70	Pi Beta Phi
A. B., Stanford, 1921			
[23]Bentz, Philip George, Jr.	Los Angeles	LD 23–16	407 Encina
[23]Berendsen, Anita M.	San Francisco	Econ. 64+42	Alpha Phi
[4]Bergen, Stanley B.	San Diego	LD	Kappa Sigma
Bergstrom, Francis Wm.	Stanford Univ.	Chem. gr.	25 Salvatierra
A. B., Stanford, 1918, Engineer, 1919			
Berk, Henry H.	Alstown, Wn.	LD 36+14	407 Encina
Berman, Morris	Petaluma	LD 52+49	305 Encina
Bernard, Dorothy Eloise	Mt. View	Chem. gr.	146 Roble
A. B., Stanford, 1920, A. M., 1921			

[5]Bernstein, Frank Stewart	San Francisco	Econ. 60+28	27 Encina
Bernt, Daniel Martin, Jr.	Manteca	Geol. 39·84+3	Theta Chi
[1]Berry, Edward Dicus	Hollywood	LD 14+0	Alpha Delta Phi
[12]Berry, James Clarke A. B., Stanford, 1921	Selma	M. E. gr.	521 Encina
Berry, Lowell Webster	Asotin, Wn.	LD 34–6	Los Altos
Berry, Melba Eloyse	Palo Alto	Ed. G. A. 114+35	833 Hamilton
[3]Berry, Othmar Bernarde	Selma	Econ. 26–15	521 Encina
[4]Berry, Willard E.	Palo Alto	LD	660 Waverley-p
Bertrand, DeWitt Clinton	Aberdeen, Wn.	M.E. 94+31	210 Encina
[12]Besse, George Julius	Placerville	LD 13–21	416 Webster-p
Beswick, Katherine	Tustin	Fr. 91+136	322 Roble
[5]Beuter, Paul Henry	Los Angeles	Econ. 81–4	209 Encina
[1]Bhole, Shanker Jairam	Hydrabad, India	Geol. 15+1	441 Waverley-p
Bianchi, Henry Edwin	San Luis Obispo	Law gr.	533 Encina
Bianchi, Marie Lucy	Mountain View	Span. 90+52	Box 375, MV-mv
Bichsel, Stanley Earnest	Ogden, Utah	Econ. 75+9	Beta Theta Pi
Biddle, Eunice Katherine	Long Beach	LD 40+32	340 Roble
[4]Biery, Ruth L. A. B., Illinois, 1918	Tulare	Engl. gr.	7 Lasuen
[4]Bigelow, Herbert S.	Mt. View	LD	Mt. View-mv
[22]Biggar, Virginia Keith	Los Angeles	Econ. 47·28+7	209 Roble
Bigler, Montell Evelyn A. B., Stanford, 1921	Palo Alto	M.E. 100·83+17	534 Channing-p
Bilger, Carl Henry A. B., Stanford, 1921	Stanford Univ.	Econ. 13·167+45	432 Encina
Billings, Geraldine	McFarland	Fr. 5·111+151	230 Roble
Bills, Walter Leonard	Coalinga	C.E. 5·133+86	223 Encina
[1]Binkley, John Toute	San Francisco	M.E. 13+13	Sequoia
Binkley, Robert Cedric	Cobb	Hist. 71·73+98	7 Cabrillo
[5]Binkley, Tholow A. B., Stanford, 1910	San Francisco	Med. gr.	2312 Webster, SF-sf
[124]Binns, Archie Fred	Shelton, Wn.	Phil. 93+10	46 Encina
Bird, Milo Alfred	Melones	Chem. 21·137+62	22 Sequoia
[2]Bireley, Frank Wolsey	Hollywood	LD 9+2	18 Circle
[4]Birnie, Bernard J.	Palo Alto	LD	223 Cowper
[4]Bishop, Clyde	Courtland	LD	16 Encina
Bishop, W. Bradford	Colo. Springs, Colo.	Geol. 72·47+46	Kappa Sigma
Bissinger, Edward Lee H. A. B., Stanford, 1921	Lompoc	Law 36·144+28	433 Encina
[12]Black, Howard Walter	Palo Alto	LD 27–14	Delta Kappa Epsilon
[22]Black, Nelson Wilson A. B., Stanford, 1921	San Francisco	Engl. 41–5	444 Encina

Black, William Madison, Jr.	Salinas	C.E. 97+44	Delta Upsilon
[5]Blackburn, Chester Oklahoma	Ontario	Chem. sp.10·118+8	62 Encina
Blackburn, Roger E.	Aberdeen, Wn.	Chem. 147+166	60 Encina
Blacker, Carroll C.	Bakersfield	M.E. 39·36+42	727 Bryant-p
Blackman, Birt Griffin	Ogden, Utah	Econ. 90+56	406 Encina
[12]Blackman, Wm. Henry	Ogden, Utah	Pol.S. 67–28	404 Encina
Blaisdell, Frank E., Jr.	San Francisco	Med. gr.	1520 Lake, SF-sf
A. B., Stanford, 1919			
Blakeslee, Edwin Mitchell	Savannah,Mo.	M.E. 131+137	Theta Xi
[4]Bledsoe, Barbara S.	Los Angeles	LD	Roble
Blennerhassett, Lawrence I.	Oakland	LD 43+2	329 Encina
[134]Blewett, Frances	Palo Alto	Econ. 2·164+260	737 Bryant-p
[23]Bley, Bertrand Adolph	San Francisco	LD 33+46	351 Encina
Blinks, Lawrence R.	Kalamazoo, Mich.	Bot. 75·76+146	359 Encina
Blinks, William N.	Kalamazoo, Mich.	Econ. 76+76	406 Encina
[5]Blood, Richard Edson	Chicago, Ill.	Econ 52·83+43	Sigma Nu
[5]Blount, S. Mildred	Lacona, N.Y.	Bact. gr.	Kingscote
A. B., Syracuse, 1912, A. M., 1918			
Blumberg, Harry Edward	San Diego	Econ. 16·79+16	660 Waverley-p
Blythe, Leora Lysle	Palo Alto	Engl. 92+44	381 Channing-p
[4]Bodley, John	Palo Alto	Educ. ‡	353 Lytton-p
[4]Bodley, J. Russell	Palo Alto	Educ.	353 Lytton-p
[1]deBoer, Aeint H.	Medan,DutchE.Indies	C.E. 15–2	731 Emerson-p
[1]Boekel, William Albert	Rathdrum, Ida.	Law gr.	Beta Theta Pi
A. B., University of Idaho, 1917, J. D., Stanford, 1921			
[12]Boezinger, Humbert Arthur	Palo Alto	Geol. 11·144–2	176 Bryant-p
Boezinger, Olivia	Palo Alto	Econ. 4·85+91	176 Bryant-p
[4]Boillot, Margaret J.	Berkeley	LD	705 University-p
[13]Bolger, James A.	Palo Alto	Econ. 76+19	820 Cowper-p
Bollinger, Eldred Floyd	Cupertino	LD 52+31	Cupertino-c
[23]Bonar, Perry Arthur	Santa Rosa	Chem. 46+30	Kappa Alpha
Bonhard,FlorenceMadeleine	LosAngeles	Fr. 45·135+68	244 Roble
A. B., Stanford, 1921			
Bonner, W. Folsom	Okla. City, Okla.	LD 45+27	Phi Gamma Delta
Bonner, Willard Hallam	San Jose	Engl. gr.	714 Univ., SJ-sj
A. B., College of Pacific, 1920, A. M., Stanford, 1921			
[1]Bonnett, Alfred B.	Riverside	LD	Beta Theta Pi
[5]Bonnot, Paul	Los Angeles	Zool. 52–15	334 Encina
Booker, Eugene Ryan	Pembina, N.D.	M.E. 54·44+5	655 So. 2d, SJ-sj
Booksin, Jeannette Louise	Campbell	Phil. 91+8	Gamma Phi Beta
[4]Boone, Andrew R.	San Diego	LD	305 Encina
[3]Boone, Thomas Harold	Palo Alto	LD 14+3	430 Forest-p
Booth, Edwin Spencer	Roseburg, Ore.	Hist. 76+69	Kingscote

Booth, Robinson Eyre — Butte, Mont. — LD 51+47 — Kingscote
Borba, Harry James — Sebastopol — Engl. 106+46 — 540 Encina
[5]Bormose, Ruth Teresa — Murrietta — Fr. 68·97+126 — 158 Roble
Borthwick, Harry Alfred — San Jose — Bot. 72·109+130 — 453 Willows, SJ
A. B., Stanford, 1921
[23]Boscoe, Carmen Thomas — Stockton — Phyl. 48·25+10 — 526 Encina
Boswell, Paul Frederick — Hartsville, S.C. — Min. gr. — 635 High-p
A. B., University of South Carolina, 1919
[5]Bothwell, Muriel Joy — Palo Alto — Econ. 138+169 — 900 Waverley-p
[5]Botley, Richard M. — Petworth, Sussex, Eng. — LD 42+19 — 634 Hamilton
Botts, Ernest Lloyd — Santa Rosa — Pre-Clin. 135·41+20 — 353 Lytton-p
Boucher, O. Jack — Oroville — Law 133+84 — Theta Delta Chi
[12]Boucher, William Robert — Oroville — Hist. 81–32 — Theta Delta Chi
[12]Boughn, Margaret Irene — Glendale — Econ. 25·42–6 — 250 Roble
[4]Bourns, Philip W. — Elk P. O. — LD — 326 Encina
Bovard, Gilbert Simpson — Sierra Madre — Med. gr. — 2221 Webster, SF-sf
A. B., University of Southern California
[12]Bowden, Jerome Trimble — San Jose — Law 45·135+122 — Delta Upsilon
A. B., Stanford, 1921
Bowden, William Burt — Seattle, Wn. — Econ. 34+0 — Zeta Psi
[5]Bowen, Chester S. — N. Vancouver, B.C. — LD 43+32 — 727 Addison-p
Bowen, Theodore E. — Twin Falls, Ida. — Law 16·103+130 — 444 Encina
[234]Bower, Gordon Rawlings — Buffalo, N.Y. — Law Sp. 26+19 — 56 Sequoia
Bower, K. M. — High River, Alberta, Can. — LD 43–9 — 420 Hawthorne-p
[2]Bowers, Herbert Leander — Santa Clara — LD 0–15
[2]Bowers, Robert Berry — Santa Clara — LD 5–14 — Encina
[124]Bowes, Glenn Howard — Monrovia — Geol. 75·101+73 — 221 Encina
[5]Bowles, Thomas Kirby — Milwaukee, Wis. — Geol. 99–8 — Zeta Psi
[1]Boyce, W. Scott — Los Angeles — Med. gr. — 526 Encina
A. B., Lake Forest College, 1903, A. M., University of Chicago, 1907, Ph. D., Columbia, 1917
[12]Boyd, Cecile Jane — Pittsburgh, Pa. — Engl. gr. — Kappa Alpha Theta
A. B., Pittsburgh, 1918
[3]Boyd, Hugh T. — Spreckels — Engl. gr. — Alpha Sigma Phi
A. B., Stanford, 1919
[5]Boyd, Robert Tilford — Harlowton, Mont. — Phyl. 10·117+67 — 62 Encina
[5]Boyd, Walter Harrington — Palo Alto — Med. gr. — 1104 High-p
A. B., University of Southern California, 1920
[234]Boyle, Darl MacLeod — Denver, Colo. — Engl. gr — Alpha Tau Omega
A. B., Stanford, 1921
Boyle, Lowell Reed — Ogden, Utah — LD 37–2 — 345 High-p
[1]Boyles, Charles D. — Centerville, Ala. — Educ. gr. — 29 Salvatierra
A. B., University of Alabama, 1919
Boynton, Kinnison Swett — Palo Alto — Chem. 72·108+70 — 847 Bryant-p
A. B., Stanford, 1921

[1]Boynton, Robert D.	San Francisco	LD	125 Encina
Bradshaw, Roch William	Orange	Econ. 114+76	319 Encina
[5]Bradshaw, Wm. Lawrence	Sacramento	Econ. sp. 10-51+34	41 Encina
Bragg, Arthur Dickinson	Carmel	LD 45+24	Sigma Nu
Brailsford, EllenE.	Hagerman, Ida.	LD 47+72	114 Roble
[3]Bramblett, Ernest King	Fresno	LD 15+12	Sequoia
Bramkamp, Paul Jay	San Jose	M.E. 90+104	281So.11thSt.,SJ-sj
[23]Brandt, Robert Louis	San Mateo	Chem. 81–26	Kappa Alpha
[1]Branick, Laurence	San Francisco	LD	
[24]Brant, Helen R.	San Francisco	LD 15+11	117 Cowper-p
Brazil, Abraham Hagberg	Castroville	Law 144+21	34 Sequoia
Brazil, Anthony Hagberg	Castroville	Econ. 90–3	34 Sequoia
[5]Brazil, Waldemar Hagberg	Castroville	M.E. 164+10	34 Sequoia
[134]Breidenbach, Emile W.	SanFrancisco	LD 20–11	Phi Kappa Sigma
[1]Brickey, Edward Marvin	Palo Alto	M.E. 26–11	345 Hamilton-p
Briggs, Alexander W.	Palo Alto	LD 61+83	249 Lowell-p
Brinkman, Newton	Stockton	Econ. 86+50	33 Sequoia
[2]Brinkmann, Heinrich Wilhelm A. B., Stanford, 1920	Riverside	Math. gr.	365 Channing
Briscoe, Laverne Wagner	San Jose	Econ. 79–18	208 Encina
Broadus, Thelma A. B., Wells College, 1920, A. M., Stanford, 1921	Montclair, N.J.	Hist. gr.	349 Hamilton
[4]Brochhausen, Anna A. B., Indiana, 1907	Indianapolis, Ind.	Educ. gr.	25 Salvatierra
Brokaw, Hal Rexford	Mayfield	LD 35+4	Ye Colonial Place, M-m
[5]Brolyer, Cecil Robert	Stanford Univ.	Chem. 33+61	9 Dolores
[23]Brooke, James Kenneth	Portland, Ore.	Geol. 47-49+10	Theta Chi
[124]Brooking, Olive A.	San Francisco	Engl. 120+54	Delta Delta Delta
[4]Brooks, Phillip T.	San Jose	LD	76 S. 11th SJ-sj
Broughton, Beatrice	Oxnard	Fr. 6-86+74	Kappa Alpha Theta
Brown, Charles Milton, Jr.	Redlands	Hist. 77+7	126 Encina
Brown, Elizabeth A. B., Stanford, 1921	Palo Alto	Econ. 180+66	469 Homer-p
Brown,Ernest Stanley	Winnemucca,Nev.	LD 44+41	4 Sequoia
[4]Brown,Evelyn	Alameda	Econ.	2322 Cedar, Berkeley-b
Brown, Everett	Eureka	Econ. 86+15	Kappa Alpha
Brown, Franklin Alvy	Newark	M.E. 60+14	9 Sequoia
[5]Brown, George Dewey A. B., Stanford, 1921	Berkeley	Phyl.-Med. gr.	628 Cowper-p
Brown, Grace Mary	Aurora, Ill.	Engl. 90+93	Delta Delta Delta
[12]Brown, Harold Austin A. B., Stanford, 1921	Fresno	Geol. 90-108+61	Phi Delta Theta
Brown, Homer Waldo	Petaluma	Econ.-Law, 126–1	228 Encina

[12]Brown, Ivor Huston	San Jose	LD 20–23	121 S. 15 St., SJ-sj
[23]Brown, James L., Jr.	Brookville, Pa.	LD 4–5	718 Bryant-p
[23]Brown, Kenneth Wm.	San Francisco	Chem. 68+27	Alpha Tau Omega
Brown, Leland Herman	Gilroy	M.E. 11·126+130	18 Encina
[1]Brown, Marian Frances A. B., Stanford, 1921	Los Angeles	Bact. 76·110+15	DeltaDeltaDelta
Brown, Merwyn H.	Winnemucca,Nev.	Econ. 88+77	SigmaAlphaEpsilon
[4]Brown, Norton S.	Stanford Univ.	LD	2 Cooksey Lane
[12]Brown, Spencer Dodge A. B., Stanford, 1921	Pasadena	Econ. 69·121+107	AlphaSigmaPhi
[234]Brown, Walter Roy	Santa Maria	M.E. 95·30+6	115 Encina
[5]Brown, William Carlton	Palo Alto	C.E. 22·45+59	311 Cowper
Brown, William Howard	Hood	Econ. 80+7	Phi Delta Theta
[234]Browning, Herbert Edward	Palo Alto	Geol. 14–5	554 Hawthorne-p
Browning, James W.	Buffalo, Okla.	LD 28–12	635 Bryant-p
Bruland, Peter O. A. B., Luther College, 1906, A. M., Stanford, 1921	Palo Alto	Engl. gr.	433 Hamilton-p
Brust, Paul Raymond A. B., Stanford, 1920	San Diego	Med. gr.	11 Salvatierra
[4]Bryan, Arthur E.	San Francisco	LD	251 Encina
Bryan, Carleton Felton	San Francisco	Law 150·104+0	Sigma Alpha Ep.
[12]Bryan, Darwin	Madera	Geol. 15·127+30	Phi Kappa Psi
Bryan, Paul Charles	San Jose	LD 29+30	28 Magnolia, SJ-sj
[1]Bryan, Wm. Howard, Jr.	Abilene, Tex.	Educ. 135·17+10	405 Tasso-p
[12]Bryant, Marjorie Stowell A. B., Stanford, 1921	San Jose	Econ. 33·149+127	251 Roble
Buckham, Stafford	Stanford Univ.	Econ. 54·102+8	124 Encina
[4]Buchanan, Dorothy K.	Runnymede	LD	Runnymede-p
[4]Buck, Ernest H. B. S., Kirksville State Teachers' College, 1911	Hailey, Ida.	Educ. gr.	358 Addison-p
Bucklin, Louis L.	Gd. Junction, Colo.	LD 48+21	225 Kipling-p
Buckwalter, John Cassell	Palo Alto	LD 44+39	1511 Waverley-p
[23]Buffum, Dorothy May	Long Beach	Hist. 77+56	Pi Beta Phi
[4]Bugbee, James M.	Hollywood	Engl. ‡	117 Encina
[12]Bulkley Milton A. B., Stanford, 1921	Oakland	M.E. 28·161+47	Alpha Delta Phi
Bullis, Richard O. A. B., Stanford, 1918	Los Angeles	Med. gr.	3151 California, SF-sf
Bullis, William Adlai	Los Angeles	LD 14+10	402 Encina
Bumbaugh, Harold L.	Los Angeles	M.E. 30·58–2	Phi Kappa Psi
Bundick, Susie Pearl	Jennings, La.	Econ. 90+80	204 Roble
Bunds, Clifford Courtney A. B., Stanford, 1920, Engineer, 1921	Santa Clara	Chem. gr.	324 Encina

[12]Bunds, Lester Archie	Santa Clara	Chem. gr.	324 Encina
A. B., Stanford, 1920			
[4]Bundy, Caryl L.	Modesto	LD	15 Encina
[5]Bundy, Douglas	Los Angeles	Geol. 60-132+154	DeltaK.Epsilon
[5]Bundy, Robert Gillis	Los Angeles	Econ. 74+84	DeltaK.Epsilon
[5]Burbridge, Charles Clair	Tracy	Geol. 140+8	114 Encina
Burch, George W. Jr.	Owensmouth	Hist.-Law 133+20	250 Encina
*[34]Burch, Joseph Earl	Kemmerer, Wyo.	Educ. gr.	Kemmerer, Wyo.
A. B., Wyoming, 1916, A. M., Stanford, 1921			
[4]Burcham, Henry MacG.	Spokane, Wn.	LD	250 Encina
[4]Burchett, James Howard	Delano	LD	250 Encina
Burdick, Donald Lowe	San Jose	Econ. 88+67	255 S. 16th, SJ-sj
Burdick, Wm. Elliott	Minneapolis, Minn.	LD 49+59	20 Encina
[4]Burdick, William LeRoy	Palo Alto	Chem. gr.	675 Tennyson-p
A. B., Kansas, 1909, A. M., 1912			
Burford, Ruby Jeanette	Macomb, Ill.	Educ. 73-107+71	210 Roble
A. B., Stanford, 1921			
[12]Burgess, Carleton Lyle	Hollywood	Econ. 40-24–5	Chi Psi
[23]Burgess, Ralph Norman	Oakland	C.E. sp. 9+11	127 Encina
[1]Burgher, Charles Clifford	Rupert, Ida.	Geol. 135-15+10	420 Hamilton-p
[23]Burgi, Dorothea Frank	Willows	Ed. G. A. 26+5	Roble
[5]Burke, Donald Vincent	Palo Alto	Med. gr.	179 University-p
A. B., Stanford, 1921			
Burke, Dorothy Lilian	Monett, Mo.	Pre-N. 89+131	527 Homer-p
Burke, Edmund Francis	Santa Barbara	Law 123–25	842 Ramona-p
Burkhard, William George	SanFrancisco	Phyl. 88+73	126 Encina
[5]Burks, Bessie Harlow	Bremerton, Wn.	Engl. 106-57-59	109 Roble
[12]Burlingame, Gladys C.	San Jose	Educ. gr.	333 Waverley-p
A. B., Stanford, 1915			
Burmister, Robert Gage	San Francisco	Econ. 93-47+28	129 Encina
Burnett, Clarence Irvin	Ely, Nev.	Pre-Med. 45-45+42	453Channing-p
[34]Burns, Frederick Joseph	Calgary, Can.	Geol. ‡10–11	Palo Alto
Burntrager, Helen	Hollywood	Econ. 7-146+212	184 Roble
Burrows, Gates Wilson	Montebello	M.E. 3-113–7	Phi Kappa Sigma
[23]Bush, James Nicholas	Helena, Ark.	LD 1–11	Zeta Psi
Bush, Loren Smith	Boise, Ida.	M.E. 96+90	202 Encina
[2]Buss, Fred Earle	Provo, Utah	Geol. gr.	515 Waverley-p
A. B., Brigham Young College, 1913			
Bussey, Charles Gordon	KansasC'y, Mo.	LD 38–6	247 Encina
[4]Butcher, Rolla Matthews	Santa Clara	LD sp.	Santa Clara
[4]Butler, Clarice Eugenia	Palo Alto	LD	121 Emerson-p
Butler, Edward William	San Diego	M.E. 82+12	33 Sequoia
Buttrey, Adelbert John	Craigmont, Ida.	LD 39+19	223 Cowper

[4]Bye, Siegurd Edward	Portland, Ore	LD	139 Encina
Byl, Donald Hennegen	San Jose	M.E. 100+136	205 Encina
†Cabangbang, Catalino	Cabugao, P.I.	Educ. ‡ 15+3	84 Sequoia
[3]Cadle, Austin	Sacramento	Geol. 167+98	Phi Kappa Psi
[124]Cady, Vernon M.	Chico	Educ. gr.	515 Emerson
B. S., University of California, 1908, A. M., Columbia, 1917			
[234]Cahen, Robert Paul	Palo Alto	Law 103+13	1135 Bryant-p
Cain, Brighton Clark	SaltLakeCity,Utah	Ent. 8·86+125	359 Encina
[4]Cairns, Earl	Pasadena	LD	Encina
[3]Caldwell, Robert Bryson	San Mateo	LD	152 Ellsworth, SM-sm
Caldwell, Worth Wilson	Portland, Ore.	LD 41+14	110 Encina
Calhoun, Katharine Sperl	Seattle, Wn.	LD 42+25	Kappa Alpha Theta
Calvin, George F.	Washington, D.C.	Pre-Med. 93·45+20	208 Encina
Cameron, Donaldine	San Francisco	Fr. 78+44	Kappa Kappa Gamma
Cameron, Francis	Salt Lake City, Utah	LD ‡ 24–8	Phi Kappa Sigma
Cameron, John Donald	Petaluma	LD 38+16	236 Encina
[1]Campbell, Arthur K.	Modesto	LD 4–14	224 Encina
Campbell, Edward Strong	Oakland	LD 46+20	Chi Psi
[5]Campbell, Floyd Paul	Portland, Ore.	Hist. 36·136+48	Kappa Sigma
[234]Campbell, Helen Douglas	Berkeley	Engl. gr.	358 Roble
A. B., University of California, 1917			
[23]Campbell, Ian James	San Mateo	LD 20–4	403 A St.,SM-sm
[23]Campbell, John Donald	San Francisco	LD 38–5	AlphaDelta Phi
[4]Campbell, J. Frank	Pasadena	LD sp.	126 Encina
Campbell, Mary Edna	Escalon	Span. 8·154+162	252 Roble
[5]Campbell, Ralph Deidrich	San Jose	Law 112+5	Alpha Tau Omega
[5]Candee, George Newton	San Jose	C.E. ‡ 2–13	523 Chapman,SJ-sj
[1]Caneer, Fernando	Montebello	Econ. 42–37	Alpha Sigma Phi
[24]Canning, John Bennet	Palo Alto	Econ. gr.	1535 Bryant-p
Ph. B., Chicago, 1913			
[4]Cannon, Leonard L.	Palo Alto	LD	301 Addison–p
Cannon, Louise Amidon	Palo Alto	Pre-N. 111+78	301 Addison-p
Cantor, Jacob Joseph	Menlo Park	Pre-Med.69·43+40	R.139A,MP-mp
Cappa, Victor Emanuel	San Jose	Pol.S. 67+10	228 Encina
[4]Cappleman, John William	Lotus	LD	329 N.3rd, SJ-sj
[1]Carballo, Ernesto J.	Jaro, Iloilo, P.I.	Phyl. ‡ 77+36	705 Cowper-p
[12]Carbaugh, Phyllis Maud	Palo Alto	Engl. gr.	575 Lincoln-p
A. B., Vassar, 1917			
Carbonell,FranciscoK.	Bacnotan,Un.,P.I.	Geol. 84–12	711 Cowper-p
[4]Cardiff, Clavel	Santa Cruz	LD	601 Waverley-p
[5]Cardoza, Alfred Thomas	Palo Alto	LD ‡ 14+10	760 Homer-p

† Deceased December 24, 1920.

[4]Carey, Clarence William	Palo Alto	LD	361 Lytton-p
[4]Carey, George Edward	Palo Alto	LD	361 Lytton-p
Carle, Jackson Tyler	Lindsay	LD 46+47	Delta Chi
[4]Carleton, Adrian Vincent	Menlo Park	LD	Menlo Park
[3]Carley, Jesse C.	Vallecito	LD 0–14	307 Encina
Carlisle, Charles Frederick A. B., Stanford, 1921	Chicago, Ill.	Econ. 23·157+58	Sig. Alpha Ep.
Carlsmith, Leonard E. A. B., Stanford, 1921	Hilo, Hawaii, T.H.	Chem. 185+160	336 Encina
Carlsmith, Margaret E.	Hilo, Hawaii, T.H.	Phyl. 122+126	182 Roble
Carlson, Everett A. B., Stanford, 1920	Stanford Univ.	Med. gr.	2018 Webster, SF-sf
Carlson, Osborn Herman	Kingsburg	C.E. 87+63	415 Encina
Carman, Helen Amesbury	San Jose	Hist. 77+26	Kappa Kappa Gamma
[12]Carmichael, David B. A. B., Stanford, 1921	Independence, Mo.	Econ. 53·129+90	319 Encina
[12]Carnahan, Kenneth Lucius	Berkeley	LD 29–3	Chi Psi
[5]Carpenter, Cyrus Clay, Jr.	Palo Alto	Hist. 45·103–1	1125 Ramona-p
[23]Carpenter, Percy William	Los Angeles	Econ. 43–20	Delta Upsilon
Carrey, Albert Adolph, Jr.	Gilroy	Geol. 108+14	323 Encina
Carroll, Mabel Agnes	San Jose	LD 44+48	Williams Rd., SJ-sj
[23]Carskadon, Harry Reynolds	Palo Alto	Econ. 112·69+84	CowperC't.-p
Carskadon, Thomas R.	Keyser, W.Va.	Engl. 57·82+151	Cowper Court
[5]Carson, Carlton Mann	Palo Alto	Geol. 45·112+49	1100 Bryant-p
Carswell, Stuart Randall B. S., Delaware State College, 1913	Elsmere, Del.	Hist. gr.	558 Hawthorne-p
[23]Carter, Charles Vance	Oakland	LD 29–2	Delta Tau Delta
Carter, Harley Roswell	Berkeley	M.E. sp. 49+3	302 Encina
[4]Carter, Helen Mattie	Modesto	Educ.	154 Roble
Carter, Loyd Frank A. B., Stanford, 1921	Portland, Ore.	M.E. 131·51+20	PhiDeltaTheta
[5]Carter, Rae Best A. B., Stanford, 1921	Modesto	Law gr.	481 Lytton-p
Carter, William Sandow A. B., Stanford, 1921	Cuba, Mo.	Econ. gr.	532 Homer-p
[23]Carvell, Margaret George	Imperial	LD 21+16	380 Roble
[4]Carver, Keath L.	Los Angeles	LD	228 Encina
Carver, Leroy Langhenry	Los Angeles	Econ. 70·67+27	Delta Upsilon
Carver, Lloyd Charles	Trident, Mont.	LD 48+31	225 Encina
[5]Carver, Ralph Langhenry	Los Angeles	Econ.-Law 41·130+114	D. Upsilon
[5]Carver, Roy William	Artesia	Law 10·74+9	Sig. Alpha Epsilon
Cary, James Alison A. B., Stanford, 1921	Mandan, N.D.	Law gr.	Theta Xi

[5]Cary, William Sayre	Mandan, N.D.	Chem. 160–3	Theta Xi
[4]Case, Myron Durfee	Sunnnyvale	LD	Sunnyvale
Cassel, Chester	Los Angeles	C.E. 50·52+57	545 Forest
[5]Castleman,GordonL.	SaltLakeC'y,Utah	Geol. 107+13	Phi Kappa Sigma
Castleman, Paul Roy	San Jose	Engl. 141+21	676 Spencer, SJ-sj
Caughey, Beatrice	Ukiah	Econ.-Law 158+75	Chi Omega
[1]Caughey, Edgar Reginald	Ukiah	Law 165–16	113 Encina
[12a]Cavanaugh, William Jones	San Mateo	Geol. 37–12	Delta Tau Delta
[1]Cavender, Alexander Charles	Mayfield	Geol.sp. 42+3	Linc'n&Bowdoin,M
Cecil, Calvert Lee	Grimes	Hist. 60–7	Theta Delta Chi
Cerruti, Edvige Mary	Los Gatos	Span. 153+227	225 Roble
Chalmers, Hollis Harry	SaltLakeCity,U.	LD ‡ 33–12	Kappa Alpha
Chamberlain, Marvin G.	SaltLakeCity,U.	Law 122+25	Kappa Alpha
Chamberlain, Orlo R.	Vancouver, Wn.	Educ. 135·44+11	437 Kipling-p
Chamberlin, Cecil Fayette	Los Gatos	LD 29–9	W.WarrenSch.,MP-mp
[12]Chamberlin, Joseph C.	SaltLakeCity,U.	Ent.sp.45·29+38	331Dartmouth,M
[4]Chan, George Yuen	Canton, China	LD	Chinese Club
[5]Chan, Gumdock	San Francisco	Chem. 9·101+14	405 Emerson-p
[4]Chance, Oliver W.	Denair	C.E. ‡	308 Encina
[4]Chandler,Fred Charles, Jr.	Cleveland,O.	Ger.	139 Encina
Chandler, Chas. Theodore, Jr.	San Diego	LD	Phi Delta Theta
[13]Chandler, Henry Arwin A. B., Stanford, 1921	San Diego	Geol. 75·114+78	Phi Delta Theta
[5]Chandler, Loren Roscoe A. B., Stanford, 1920	Fresno	Med. gr.	2735 Clay, SF-sf
Chandler, Norman	Los Angeles	Econ. 91–22	DeltaKappaEpsilon
[12]Chaney, Mary Catherine	San Jose	LD 27+38	377 Roble
[5]Chaney, Norman B.	Phoenix, Ariz.	Econ.-Law 157+93	554 Encina
Charles, Benjamin Cliffe	Los Angeles	LD 38–7	Alpha Delta Phi
Charles, Shirley Weston	Palo Alto	Fr. 90+75	251 Lincoln-p
Chase, Amy Leona	Los Angeles	LD 44+54	164 Roble
Chase, Don Marquis	Atascadero	LD 44+42	Chinese Club
[4]Chase, Howard Stephen	San Jose	LD	125 Martin, SJ-sj
[4]Chase, Margaret H. A. B., Dalhoúsie, 1899, A. M., University of California, 1915	San Luis Obispo	Educ. gr.	758 Waverley-p
Chase, Mary Katherine	Stanford Univ.	Econ. 45·96+206	303 Roble
[4]Chase, Melvin Leslie A. B., University of Wisconsin, 1917	Bakersfield	Educ. gr.	University Hotel
Chase, Richard	San Diego	Econ. 73+2	Phi Kappa Sigma
[12]Chedister, Arthur William	Clovis	LD 25–5	31 Sequoia
Cheesborough, Esther S. A. B., Stanford, 1921	Galveston,Tex.	Engl. 57·124+68	Kappa A. Theta
[1]Chelli, Ercole Lorenzini	San Rafael	Chem. 10–23	36 Sequoia

Chen, Chi	Foochow, China	E.E. gr.	Chinese Club
B. S., Louisiana State College, 1920; Engineer, Stanford, 1921			
Chevalier, Ragnhild M.	Belvedere	Fr. 100·80+100	166 Roble
A. B., Stanford, 1921			
[1]Chew, Sam	Oakland	Phyl. 37·60–7	Chinese Club
[23]Chi, Chen-to	Moukden, China	Educ. ‡ 21–10	Chinese Club
[5]Chilcote, Russell Cooper	Fostoria, O.	Phyl.-Med. 92·120·89	PhiD.Theta
A. B., Stanford, 1921			
[5]Childers, Leland Alonzo	Santa Cruz	Zool. 103+6	31 Encina
[5]Chisholm, Albert George	San Francisco	Chem. 38–13	57 Sequoia
[4]Chiu,RooseveltC.,Jr.	HongKong,China	LD	Chinese Club
[5]Chorbajian, Albert Kalem	Fresno	Pre-Clin. 135·47 52	327 Encina
Chrisman, Herman Henry	San Jose	Hist. 7·112+112	348 Encina
[5]Christianson, Arthur B.	Moro, Ore.	M.E. ‡ 12–1	235 Emerson-p
[12]Christie, Amos Uriah		LD ‡ 28–24	Alpha Sigma Phi
[12]Christie, Howard Chandler	Los Angeles	Econ. 60+19	DeltaKappaEpsilon
von Christierson, Frank Fred.	San Jose	Psych. 96+98	225 S. 15th, SJ-sj
von Christierson, Sigurd	San Francisco	Med. gr.	2315 Sacramento, SF
A. B., Stanford, 1917			
[5]Chuck, Ah Fong	Honolulu, Hawaii	Econ. 45·100+53	6 Cabrillo
[4]Chuck, Faw Yap	Canton, China	Chem. 75·15+10	Chinese Club
Churchman, Hazel Vera	Santa Rosa	Zool. 93+120	331 Roble
Claflin, Paul Cuddeback	Los Angeles	Econ. 68·39+8	Phi Delta Theta
[4]Clancy, Edward	San Diego	LD	20 Alvarado
Clancy, Marion Alice	Riverside	Econ. 136+173	Pi Beta Phi
Clapp, Edwin Roosa	Santa Rosa	LD 51+98	87 Sequoia
[4]Clark, Arthur John	Bishop	Pre-Med.	107 Ramona Apts.-p
[4]Clark, Dorothy L.	Petaluma	Econ. ‡	Roble
Clark, Dorothea Miller	Los Angeles	Ed. G. A. 17·124+37	Chi Omega
[5]Clark, Esther Bridgman	Stanford Univ.	Pre-Clin. 181+182	4 Cabrillo
A. B., Stanford, 1921			
[23]Clark, Frances Naomi	San Jose	Sch. Ed. gr.	1022 Bird, SJ-sj
A. B., Stanford, 1918			
Clark, George Dickson	Menlo Park	C.E. 90+82	Menlo Park-mp
Clark, George Stuart	Carmel	M.E. 138+159	Delta Upsilon
[5]Clark, Helen Osgood	Evanston, Ill.	Fr. 46·49+71	913 Roble
[2]Clark, Henry Russell	Los Angeles	Geol. 99·82+44	221A Channing-p
A. B., Stanford, 1921			
Clark, Howard Marshall	Ashland, Ohio	Econ. 78–11	Phi Delta Theta
[23]Clark, Joseph Edward	Los Angeles	LD 27–16	Zeta Psi
Clark, Leslie Madison	Sawtelle	LD 4·54+56	Encina
Clark, Mary Jane	Los Angeles	Eng. 66·112+98	Kap. Alph. Theta
[2]Clark, Newton	Hood River, Ore.	M.E. 39–31	224 Encina

Clark, Orion Frederick	Los Angeles	LD 48+5	349 Encina
Clark, Philip Corriston A. B., Stanford, 1921	Carmel	M.E. 180+186	Delta Upsilon
[5]Clark, Wilfred Sterling A. B., Stanford, 1921	Palo Alto	Med. gr.	PhiKappaSigma-p
Clarke, Bonita Fravel	San Jose	Hist. 71+14	315 Roble
[23]Clarke, R. Thurmond	Los Angeles	LD 21–20	Zeta Psi
[134]Classen, Willard John	Atherton	Geol. 155+33	Atherton
[4]Clayton, Willis Sherman	San Jose	LD	Encina
Cleaveland, Norman	Berkeley	M.E. 88+2	Sigma Chi
[12]Clemens, Jere Joseph A. B., University of Southern California, 1920	Los Angeles	Med. gr.	Sigma Chi
[4]Clement, Evelyn A. A. B., College of Pacific, 1909	Sacramento	Lat. gr.	459 Hamilton-p
Clement, Kenneth Neil A. B., Stanford, 1921	Burlington, Vt.	Econ. 135·45+5	350 Encina
[14]Cleveland, Acton Meek	Camptonville	LD 12–6	22 Encina
[5]Clifford, Connell	Kewanee, Ill	Econ. 57·74+145	620 Gilman-p
†Cloney, Miles Joseph	Eureka	Phyl. 120+3	207 Encina
Cloud, George Hurach A. B., Stanford, 1919, A. M., 1921	Fresno	Hist. gr.	3 Sequoia
Clunie, Helen	Menlo Park	Engl. 71+0	Menlo Park,Bx95-p
[4]Clyde, Paul Hibbert A. B., Stanford, 1921	Victoria, B.C.	Hist. gr.	20 Lasuen
Coakley, Clyde Edwards	Spokane, Wn.	C.E. 10·93+54	507 Encina
[4]Cobb, Miles	Pasadena	LD	105 Encina
[4]Cobb, Naoma Dayle	Palo Alto	LD	438 Bryant-p
Coberly, Dwight Wilcox	Oakesdale,Wn.	M.E. ‡ 26–8	31 Sequoia
[5]Coblentz, Herbert Cerf A. B., Stanford, 1921	Stockton	Law. gr.	249 Encina
[4]Coblentz, Richard	San Francisco	LD	240 Encina
[5]Cochrell, Max	Wichita, Kans.	Econ. 135·34–3	11 Salvatierra
Cody, Bernard Anthony A. B., Stanford, 1921	Long Beach	Phyl.-Med. 12·176+110	232Encina
Coe, Harry Carson A. B., Stanford, 1916	Selma	Med. gr.	2327 Sacramento, SF
Cohan, Aaron David	San Francisco	Econ. 65·41+29	56 Sequoia
[5]Cohen, Aaron Norman	Portland, Ore.	Law 34·149+20	445 Encina
[1]Cohen, John Walter, Jr.	Los Angeles	Engl. ‡ 18–2	436 Encina
Cohen, Marjorie Alice	CarsonCity,Nev.	LD 40+1	173 Roble
Cohen, Mark Madison	Portland, Ore.	Hist. 38·88+138	445 Encina
[4]Cohn, Arthur Cardinet	San Francisco	LD	108 Encina
[5]Cohn, Dave Solis	Spokane,Wn.	Geol. 140+90	427 Encina

† Deceased, March 26, 1921.

[4]Cohn, Lawrence Ted	San Francisco	LD	108 Encina
[4]Colbert, Gail	San Diego	Hist. ‡	15 Lasuen
Cole, Frank Raymond	Redlands	Ent. gr.	332 Channing-p
A. B., Pomona, 1913, A. M., Stanford, 1921			
Cole, Ralph Emerson	Los Angeles	LD 43–3	356 Kingsley-p
[3]Cole, Ralph W.	Santa Ana	LD 10–7	26 Sequoia
Coles, George Raymond	San Jose	Chem. 74–13	80 S. 11th, SJ-sj
[5]Coll, Daniel	San Francisco	Med. gr.	2321 Sacramento, SF-sf
Collett, Beryl Bishop	Palo Alto	Engl. gr.	620 Homer-p
A. B., Greenville College, 1908			
[23]Collett, Charles Elmer	San Francisco	LD 29+6	Delta Tau Delta
Collins, Erle LeRoy	Stanford Univ.	Chem. 142+4	226 Encina
[5]Collins, George Ainslie	Portland, Ore.	Geol. 32·107+26	Zeta Psi
Collins, Junior Jennings	Ft.Worth,Tex.	LD 48–5	30 Sequoia
Colton, John Henry	Bakersfield	C.E. 126–13	320 Encina
[234]Colvin, Howard Milton	Phoenix,Ariz.	Pol.S gr.	22 Lasuen
A. B., University of Washington, 1909; LL. B., Yale, 1911			
Colvin, Tim Edward	Piedmont	LD 6·47+1	Phi Gamma Delta
[5]Coman, William Meriam	Palo Alto	Educ. gr.	707 Addison-p
A. B., Stanford, 1921			
Combs, Sadie Kesziah	Sigourney, Ia.	Fr. gr.	Madroño
A. B., Iowa, 1912			
Combs, William Hooper	Los Angeles	Law 76·122–12	Beta Theta Pi
[4]Comparet, Bertrand Lewis	San Diego	LD	113 Encina
[4]Compton, Russell Leslie	San Diego	LD	113 Encina
[4]Comstock, Hazel Dell	San Jose	Educ. ‡	703 E. Santa Clara, SJ-sj
[5]Comstock, William Sears	Alhambra	C.E. 51·78+14	Zeta Psi
Conard, Harold Shaver	San Diego	C.E. 92+96	Delta Chi
Conard, Mildred Rovena	San Diego	LD 43+31	Pi Beta Phi
Concklin, Grace Chamberlin	Los Gatos	Ger. gr.	2 Salvatierra
A. B., College of Pacific, 1919			
Condit, William Clyde	Oakland	Hist. 45·81+3	408 Encina
[1]Conmy, Peter Thomas	San Francisco	LD 14+13	402 Encina
[4]Conner, Jay Davis	Palo Alto	Educ. 67·16+5	750 Bryant-p
Connolly, John Briggs	San Francisco	LD 42+21	402 Encina
Connolly, Robert Cottman	Palo Alto	M.E. 132+55	320 Encina
[12]Connolly, Washington Lewis	PaloAlto	Econ. 31·150+105	320 Encina
A. B., Stanford, 1921			
Constant, Shelby Andrew	Buhl, Ida.	LD 39–16	115 Encina
[4]Cook, Adella	San Jose	Chem. gr.	350 Roble
B. S., California, 1908			
[4]Cook, E. Gertrude	San Jose	Engl. gr.	350 Roble
B. L., California, 1903			
[4]Cook, Edward Irvin	Sacramento	Pol.S.	667 Channing-p

[4]Cook, Inez M. A. B., Nebraska, 1914	Lincoln, Neb.	Educ. gr.	810 Waverley-p
[5]Cook, Lawrence Harvey A. B., Stanford, 1921	Palo Alto	Chem. gr.	334 Homer-p
[4]Cooke, John D. A. B., Stanford, 1914, A. M., 1915	Los Angeles	Engl. gr.	310 Waverley-p
[5]Cooke, William Clifford	Palo Alto	Chem.-Med.144+13	310Waverl'y-p
[4]Cooke, William Henry A. M., Pomona, 1921	Claremont	Hist. gr.	1 Lasuen
[34]Cookerley, WilliamNoah	S.Milford,Ind.	LD 15–14	343 Cowper-p
Cooley, Walter Harvey	Palo Alto	Law 98·44+35	201 High-p
Cooper, Frances Lenore A. B., Stanford, 1921	San Diego	Engl. 67·117+103	381 Roble
Cooper, Lloyd Edward	Roseville	LD 46+19	53 Sequoia
Copeland, Ivo	Los Angeles	Engl. 87+68	Kappa Alpha Theta
[4]Coplen, James B.	Corona	LD	Delta Chi
Coplen, John Wiley	Corona	Econ. 139+21	Delta Chi
Copley, Ralph David A. B., Stanford, 1921	Selma	Geol. 59·123+48	22 Encina
Corby, Grant White	Los Angeles	Geol. 152+85	Alpha Tau Omega
[234]Corcoran, Agnes A. B., California, 1920	San Francisco	Engl. gr.	1265 Florida, SF-sf
[134]Corey, Augusta Eleanor	Palo Alto	Ed.G.A.44·22–13	909University-p
Cormany, Robert Hugh	Las Cruces,N.M.	Law ‡ 31–27	49 Encina
Cornell, Elton Fred	Sunnyvale	Chem. 80+94	Sunnyvale-s
Cornell, Mildred Verele	Sunnyvale	Engl. 138+132	Sigma Kappa
Cornes, Mary Lida	San Jose	Lat. 14·140+255	147E.Julian,SJ-sj
Cornish, Herbert J., Jr.	Denver, Colo.	Econ.-Law 127+35	DeltaUpsilon
[23]Cota, Florencio M.	Jerome, Ariz.	M.E. 117+7	246 Encina
[1]Cotton, John Sterling	Fort Bragg	LD	627 Channing-p
[5]Cottrell, Lillian	Hebron, Neb.	LD 48+55	150 Roble
Cotzias, Alexander C.	Stanford Univ.	C.E. 57+45	72 Sequoia
[3]Couch, Leon Woodbury	San Jose	LD 6–12	313 S.10th St., SJ-sj
Coulter, James Scholl	Frankfort, Ind.	Econ. ‡ 40+2	12 Sequoia
[3]Coulter, Lewis Clark	Portland, Ore.	LD 9–4	347 Encina
[4]Coulthurst, Lawrence J.	San Diego	Chem.‡	20 Alvarado
Coverley, Harvey Mills	Los Angeles	LD 44+32	421 Encina
Covey, Frederick Arthur	StanfordUniv.	M.E. 105+140	85 Sequoia
Cowan, Clarence Bert A. B. Stanford, 1919	Fresno	Med. gr.	2869 Clay, SF–sf
Cowgill, Frank Hubert A. B., Stanford, 1921	Los Angeles	Econ. 41·140+84	AlphaSigmaPhi
Cowing,RalphHuffaker	CarsonC'y,Nev.	Law 132–17	Chi Psi

Cox, Albert Brooks A. B., Stanford, 1909, J. D., 1921	Palo Alto	Law gr.	1227 Byron-p
[3]Cox, Philip Arnold	Gilroy	Law sp. 0–12	421 Encina
[5]Coyle, Daniel Kenneth	San Jose	M.E sp. 62+3	528 S. 2nd, SJ-sj
[1]Crafts, Lilian Louise A. B., Rochester, 1906, A. M., 1911	Rochester, N.Y.	Educ. gr.	324 Emerson-p
[23]Craig, Harold Carter	Willows	M.E. 114–13	Alexandria Hotel-p
[1]Craig, Isabel Ann	Gridley	Engl. 79–16	Delta Delta Delta
[5]Craig, Joseph Allen	Sacramento	Phyl. 78+2	Kappa Sigma
[5]Craig, Wallace A.	Gt. Falls, Mont.	Chem. 155+7	Alpha Sigma Phi
[4]Cramer, Dewin Glenn	Santa Monica	LD	303 Encina
Cramer, Dorothy	Palo Alto	Econ. 4-132+159	675 Channing-p
Crandall, Kenneth H.	Hollywood	LD 48+66	Phi Kappa Sigma
Crandall, Richard R.	Hollywood	Geol. 47-51+89	Phi Kappa Sigma
Crandall, Shannon, Jr.	Los Angeles	LD 27+0	Alpha Delta Phi
Crane, William Whitefield, Jr. A. B., Stanford, 1917	Oakland	Med. gr.	2321 Sacramento, SF-sf
[5]Cranson, Lorin Alvin	Sebastopol	Geol. 137+103	216 Encina
[4]Crapser, Anna H. A. B., Mills, 1921	Tacoma, Wn.	Fr. gr.	23 Kingscote Apts.
[4]Craven, Leonard T.	Seattle, Wn.	Pre-L.	381 Lytton-p
Craven, Margaret	Bellingham, Wn.	LD 48+95	224 Roble
Craven, Wilson	Bellingham, Wn.	LD 45+70	106 Encina
[13]Cravens, Robert Irving	Los Angeles	Econ. 48–1	Zeta Psi
Crawford, Alonzo Lawson	Hanford	Law 44-72+5	352 Encina
[34]Crawford, Caspar G.	Dickinson, N.D.	LD 16–5	Sequoia
[4]Cray, Geo. Oliver		LD	
Creed, John Hedley, Jr.	Oakland	LD 36–22	249 Encina
[1]Creegan, Charles James	Sapulpa, Okla.	Law ‡ 9–9	7 Salvatierra
[5]Creglow, Loran Andrew	Menlo Park	Geol. 15-120+115	PhiKappaSigma
Creighton, Victor Edwin	Tampico,Mex.	LD 30–10	Phi Gamma Delta
[5]Crever, Dorothy Rose A. B., Stanford, 1921	San Jose	Math. gr.	367 Roble
[4]Croad, Russell	Oakland	LD	
[4]Crobaugh, Bernard Alva	San Jose	LD	66 Stockton, SJ-sj
Crobaugh, Clyde Julian A. B., Stanford, 1920, A. M., 1921.	San Jose	Econ. gr.	66 Stockton, SJ-sj
Crobaugh, Maizie Roberts	San Jose	Econ. 46+80	66 Stockton, SJ-sj
[124]Cronin, Mary Alice	San Jose	Educ. 109-53+61	190 S. 7th, SJ-sj
[4]Crook, Oliver Lawson	Oakland	LD	248 Encina
[1]Crosby, Carlisle Cameron A. B., Stanford, 1920	Hayward	Law gr.	Kappa Sigma
Cross, Charles Burton	Merced	LD 39–7	125 Encina

[5]Cross, Robert John A. B., Stanford, 1911, A. M., 1921	Mayfield	Chem. gr.	Mayfield-m
Crossan, Carroll B.	Huntington Park	M.E. sp. 13–25	546 Encina
Crouser, Clarence Francis	San Jose	Econ. 91+7	28 S. Lincoln, SJ-sj
[23]Crow, Loy Ward	Maxwell	LD 28–9	448 Encina
Crowe, Earle Edward	Porterville	Econ. 3·169+18	Delta Tau Delta
[5]Crowe, Mary Eva Wood	Tulare	Hist. 178+56	104 Roble
Crowell, J. Irving, Jr.	Los Angeles	LD 37–9	Alpha Tau Omega
[4]Crowther, Alma E.	Plymouth, Idaho	LD	Runnymede-p
[12]Crump, Ross Owen	San Jose	LD 30+23	Box 330, R2, SJ-sj
[2]Cuddy, John Martin	Tonopah, Nev.	Hist.-Law134–15	AlexandriaH-p
[5]Culkin, Edmund A.	ColoradoSpgs.,Colo.	Geol. ‡ 34+4	405 Kipling-p
Culp, Crozier Cordell A. B., Stanford, 1921	Coeur d'Alene,Ida.	Law gr.	247 Encina
[23]Culp, George Joseph	Pacific Grove	LD 32+36	52 Sequoia
[23]Culp, Haver Byron	Coeur d'Alene, Ida.	LD 27–18	247 Encina
Culver, Esther Miriam	Palo Alto	Engl. 94+23	273 Roble
[1]Cumming, Joseph Allen	Nogales, Ariz.	Econ. 10·87–12	Phi Kappa Psi
[23]Cummings, Louis Duncan	Los Angeles	LD 13+9	Kappa Sigma
Cundall, Kenneth Newton	Alameda	Chem. 92+39	120 Encina
Cundall, Roland Lewis A. B., Stanford, 1921	Alameda	Chem. 22·159+128	120 Encina
Cunha, Marion Buckley	San Francisco	Econ.-Law 121+102	AlphaD.Phi
[12]Cunningham, McDowell	Cupertino	Econ. 34–13	125 Encina
Cupid, Albert William	Watsonville	Econ.-Law 117+15	527 Encina
[23]Cureton, Edward Eugene	San Jose	LD 32+17	360 N. 16, SJ-sj
[2]Curtice, Aubrey Arthur A. B., Stanford, 1920	Portland, Ore.	Geol. gr.	Delta Upsilon
Curtis, Eugene Alden	San Francisco	Econ. 82·72+21	Theta D. Chi
[1]Curtis, Oren Oakland	Modesto	Econ. ‡ 0–16	50 Encina
Curtis, Rowen Doust	Pittsburgh, Pa.	Chem. 77+45	210 Encina
Cuthbertson, Grace Pearl	Mill Valley	Econ. 130+69	10 Cabrillo
[4]Cutler, Harmon Edgar	Endicott, Wn.	Law ‡	6 Lasuen
[1]Cutler, Herbert Holley	Los Angeles	Geol. 53–33	430 Tasso-p
[4]Daigle, Ella Mary	Ebro, Minn.	LD	Roble
[234]Dailey, Gardner Acton	Long Beach	Ent. 75·13+24	Stanford Union
[23]Dake, Irving Chittenden	Santa Cruz	LD 31–28	Kappa Sigma
Dale, Helen Lois A. B., Stanford, 1921	Palo Alto	Bot. 184+287	1022 Forest Ct.-p
Daley, Helen Hunt A. B., Stanford, 1921	Cheyenne, Wyo.	Engl. 181+116	634 Hamilton-p
Dallas, Donald Alexander	Redlands	Zool. 57·93+25	Sigma Chi
[4]Daly, Charles F.	Eureka	LD	59 Encina

[1]Daniels, Foster Winslow — Pasadena — LD 16+15 — Wm.War.Sch.,MP-mp
Dannenbaum,MildredD. — Parsons,Kans. — LD 45+26 — 226 Roble
Danner, Gwinavere Inez — Orange — Econ. 67+13 — 309 Roble
[5]Darke, Frederick E. — San Luis Obispo — Econ. 87·65+44 — 237 Encina
[5]Darling, Herbert H., Jr. — Brookline,Mass. — Phyl. 9·127+84 — AlphaDeltaPhi
Darlington, Thomas D. — Jerome, Ida. — C.E. 78+16 — 625 Emerson
[234]Darsie, Marvin Lloyd — Los Angeles — Educ. gr. — 360 Addison
B. S., Hiram, 1908, A. M., Stanford, 1913
[4]David, Leon Thomas — Vallejo — LD — 335 Encina
[1]Davies, Haydn Glandon — Martinez — Pre-Clin. ‡ 4–17 — 424 Encina
Davies, James M. — Los Angeles — Geol. 108+29 — Delta K. Epsilon
[1]Davis, Cachot Stephen — San Francisco — Econ. 48·136+31 — Phi Kappa Psi
A. B., Stanford, 1921
[4]Davis, Corinne — Lindsay — Educ. gr. — Roble
A. B., Stanford, 1918, A. M., 1919
[4]Davis, Eugene L. — Santa Maria — Geol. 24·127+77 — Fillmore-f
[23]Davis, George E. W. — Berkeley — Law 82·49–17 — Sig.AlphaEpsilon
Davis, George Harland — Seaton, Ill. — M.E. ‡ 27–16 — 655 S.6th, SJ-sj
Davis, Herbert Adlington — Burley, Ida. — Law 34·172+45 — 233 Encina
A. B., Stanford, 1921
Davis, Hester Ruth — Mayfield — Bot. 186+241 — 362 Lincoln, M-m
A. B., Stanford, 1921
Davis, Homer — Menlo Park — Educ. gr. — Menlo Park
A. B., Indiana, 1920
Davis, Laura Maud — Santa Ana — Hist. 90·90+76 — Alpha Omicron Pi
A. B., Stanford, 1921
[3]Davis, Nellie Jenkins — Philadelphia, Pa. — Engl. gr. — 3 Lasuen
[5]Davis, Paul Herbert — Long Beach — M.E. 99·69+70 — Theta Xi
[4]Davis, R. Carol — Palo Alto — LD — Runnymede-p
Davis, Ruth Temple — Burley, Ida. — Hist. 132+22 — 206 Roble
Davis, Vesta Irene — San Jose — Engl. 22·158+39 — 506 S. 9th., SJ
A. B., Stanford, 1921
[1]Davis, Victor DeWitt — Mayfield — M.E. 10·61+47 — 216 High-p
[5]Davis, Wallace Merle — Portland, Ore. — Hist. 167+12 — Sigma Chi
Davis, Winthrop Woodworth — Oakland — Pol.S.-Law 32·103+73 — 408 Encina
[1]Davison, Maynard P. — Honolulu,T.H. — Geol. 78–24 — Delta Tau Delta
Dawes, R. Earl — Bozeman, Mont. — Econ. ‡ 26–9 — 216 High-p
Dawes, R. Truman — Santa Ana — LD 37–12 — Theta Delta Chi
Dawson, George Isaac — Oakland — Med. gr. — S. F. Hosp., SF-sf
A. B., California, 1915
[5]Deach, Ivan J., Jr. — Escondido — Chem. 84+26 — 60 Sequoia
Dean, Ardys Thelo — Berkeley — LD 49+33 — 17 Encina
Deben, Roy Henry — San Francisco — Econ. 134+81 — 527 Encina

[5]Debenham, Martin A. B., Stanford, 1921	San Francisco	Educ. gr.	1022 Waverley
[23]Dechman, Dwight A. A. B., Stanford, 1921	San Jose	Geol. 181+113	203 Encina
Deems, Howard Earl A. B., Stanford, 1921	Long Beach	Econ. 87·95+21	Phi Kappa Psi
[3]Deeter, Forrest S. A. B., Wabash College, 1914	Columbia City, Ind.	Educ. gr.	329 Hawthorne-p
Deffebach, Charles Arthur	Los Angeles	Econ. 78·39+3	Kappa Sigma
DeGolyer, Joseph Baldwin, Jr. A. B., Stanford, 1921	Lincoln	Econ. 181+75	Theta Chi
[1]DeGroot, Dudley Sargent	Sierra Madre	Zool. 46+26	Sigma Nu
Delahoyde, Dorothy E.	Los Angeles	LD 44+14	Alpha Omicron Pi
[1]Delkin, James Ladd	Seattle, Wn.	Engl. 51·15–6	11 Sequoia
[4]Dellepiane, Henry Carl	San Francisco	LD	3927-24th, SF-sf
Delpech, Jean Joseph	Memphis, Tenn.	Econ. 149+86	AlphaKap.Lambda
[5]DeLuca, Eugene Instituto de Gensanddi Roma. McCormick Theological Seminary	San Jose	Fr. gr.	226 S.3rd, SJ-sj
Dement, Alice Louisa	MyrtlePoint,Ore.	Engl. 137+122	278 Roble
Demond, Earle Frank A. B., Stanford, 1921	Los Angeles	Chem. gr.	336 Encina
[4]Dennis, Guy Hewitt	Los Angeles	LD	110 Encina
[5]Dennison, Alice Louise	Los Angeles	Fr. 54·92+52	227 Roble
[3]Desai, Chinauld Chhotalal	Kaira, India	Phyl. ‡ 10–6	84 Sequoia
Detrick, Lawrence Everett	Bishop	LD 40+7	424 Encina
Deuel, Norman B.	Chico	LD 44+17	Phi Kappa Sigma
DeVault, Aylett French	Boise, Ida.	M.E. 40·46+46	202 Encina
[5]Devlin, Arthur Coghlan A. B., Stanford, 1921	Fair Oaks	Law 52·138+19	Del. Kap. Epsilon
Devor, George Isadore	Los Angeles	Econ.-Law 137+72	541 Encina
[5]DeVries, Martin	Palo Alto	Econ. 67·114–12	326 Waverley-p
Dewing, Charles William	Oakland	C.E. 23·141+10	433 Encina
DeWolfe, Norton Creemer	San Mateo	LD 46+43	206 Ellsworth, SM-sm
Dexter, Winfield Curtis	Gresham, Ore.	M.E. 133–26	Kappa Sigma
[4]Dickey, William James	Madera	LD	306 Encina
[4]Dickerson, Viva K. Ph. B., Denison University, 1906	Morgan Hill	Educ. gr.	103 Roble
Dierker, Alwin Victor	Orange	Bot. 112+121	325 Encina
[28]Digardi, John Francis	Martinez	LD 10–18	301 Encina
[4]Dill, Esther Maurine	Seattle, Wn.	Econ. ‡	261 Homer-p
Dillon, Fairfax K.3d	Richmond, Va.	Econ. ‡ 14–32	Kappa Sigma
Dills, Leslie Harrison	Yakima, Wn.	LD 45+45	Phi Gamma Delta
Dimaano, Gregorio A. B., Stanford, 1921	Lipa Batangas,P.I.	Educ. 135·49+36	711 Cowper

Dinapoli, Domenick	San Jose	E.E. gr.	317 Encina
A. B., Stanford, 1921			
[4]Dirstine, Pearl H.	Pullman, Wn.	Chem. gr.	302 Encina
B. S., State College Washington, 1916			
[1]Dixon, Robert J.	San Jose	Med. gr.	1740 Steiner, SF-sf
Dobbel, Charles Arthur	Palo Alto	Min. gr.	640 Forest-p
A. B., Stanford, 1921			
[4]Dobbel, Edith Elizabeth	Palo Alto	LD	640 Forest-p
Dobbel, Lillian May	Palo Alto	Geol. 86+97	640 Forest-p
[1]Doble, John Ashton	San Francisco	M.E. 112-4–6	190 Sea Cliff, SF-sf
Doble, Warren	San Francisco	M.E. 10-170+96	190SeaCliff,SF-sf
A. B., Stanford, 1921			
[5]Dodd, Harold Valby	Los Angeles	Min. gr.	547 Encina
[3]Dodds, Alice	San Jose	LD 14+14	111 Roble
Dodds, Edward Brandon	Oakland	LD 17–20	15 Salvatierra
[4]Dodson, Mae Viola	Palo Alto	Educ. ‡	187 Bryant-p
[2]Doe, Charles Webster, Jr.	San Francisco	Law 5-123–19	Beta Theta Pi
Doescher, Paul Frederick	Anaheim	Pre-Med. gr.	706 Cowper
A. B.,University of Southern California, 1920			
Doherty, Randolph	Clifton, N.J.	Econ. 90-48+43	Chi Psi
Dominguez,FlorencioC.	MexicoC'y,Mex.	Chem. 48+12	238 Encina
[1]Donahue, Marvel B.	San Francisco	Econ. ‡ 11–3	Phi Kappa Psi
Donald, Kathryn	Portland, Ore.	Psych. 138+61	175 Roble
Donaldson, Dorothy Ellen	Palo Alto	Span. 182+151	737 Webster-p
A. B., Stanford, 1921			
Donoho, Truman Lawrence	Fowler	Span. 136+119	5 Sequoia
Donohoe,ThomasMiller	Cordova,Alaska	Pol.S. 94+71	Chi Psi
[4]Donohugh, Willia N.	Los Angeles	LD	345 Encina
[234]Doolan,JeromeKaseberg	San Francisco	C.E. gr.	2170 Hayes, SF-sf
A. B., Stanford, 1920			
Dorland, Willet	San Diego	Law 103+39	Chi Psi
[4]Dorris, Mildred	Phoenix, Ariz.	LD	321 Roble
[4]Dorsey, Clyde Archer	Van Nuys	Chem.gr.	212Hanov'r,Mayfi'ld-m
B. S., Kirksville State Normal, 1917			
[5]Dougan, Stanley	Palo Alto	Med. gr.	856 Middlefield-p
B. S., Ohio State, 1914			
Doughty, Raeburn M.	Austin, Texas	Geol. 39-36+25	Sigma A. Epsilon
Douglas, Chesley McKinley	San Jose	Econ. 60+31	1101 S. 1st, SJ-sj
Douglas, Helen Frances	Marysville	Chem. 10-172+210	154 Roble
A. B., Stanford, 1921			
[23]Douglas, Herbert Victor	DeKalb, Miss.	Econ. sp. 33–1	Encina
[23]Douglass, Helena, Jeanette	Los Angeles	Econ. 62+37	Gamma Phi Beta
Douglass, Wilson F.	Council Bluffs, Ia.	LD 49+48	247 Encina
Dows, Samuel Randall	Sebastopol	M.E. 67-43–1	15 Encina

[1]Doyle, Dorothy Grace	San Francisco	Bact. 48·46–18	Delta Gamma
Doyle Melvin Edward	Riverside	Law. 181+19	332 Encina
[4]Dozier, Doris	Modesto	Educ. gr.	232 Roble
A. B., Mills, 1920			
[5]Drabkin, Charles	Los Angeles	Pre-Med. ‡ 52+79	249 Kipling-p
Drachman, Rosemary	Tucson, Ariz.	Engl. 116·39+54	266 Roble
Drake, George F., Jr.	Los Angeles	M.E. 35·81–20	217 Encina
Draper, Charles Stark	Palo Alto	Psych. 94·77+81	Sigma A. Ep.
[5]Draper, Guy	Arroyo Grande	Geol. 56·95+23	13 Encina
Dreibelbis, F. Ralph	Hamburg, Pa.	LD 49+10	451 Encina
Dreyfuss, Milton	Buffalo, N.Y.	LD 46+83	Chinese Club
[4]Driscoll, John Austin	San Jose	LD	269 S. 3d, SJ-sj
Driver, Earl Paxton	Sacramento	LD 33–25	Theta Delta Chi
[234]Driver, Herschel L.	Portland, Ore.	Min. gr.	Theta Xi
A. B., Stanford, 1919, A. M., 1921			
[5]Driver, Robert Sample	Sacramento	Law 77·93+8	Theta Delta Chi
[23]Drugg, Walter C.	Webb City, Mo.	Econ. ‡ 24+6	25 Sequoia
Drury, Douglas Richard	Victoria, B.C.	Med. gr.	2325Sacramento,SF-sf
A. B. Stanford, 1919			
[4]Dryden, Horace Walder	Oakland	LD	336 Encina
[5]Drysdale, George Sidney	Vallejo	LD 10·38+20	122 Encina
DuBois, Robert Huston	Vancouver,Wn.	M.E. 190+170	346 Encina
A. B., Stanford, 1921			
[124]Duff, Margaret Helen	Menlo Park	Bot. 98+65	Menlo Park-mp
[18]Duggan, Jessie Virginia	San Francisco	Econ. 60–21	Gamma Phi Beta
Dulley, William Walker	Monrovia	M.E. 78+40	201 Encina
[12]Dunbar, Wm. Henry Kruger	Alameda	LD 24–4	Chi Psi
[1]Duncan, Carl Dudley	Fresno	Zool. 24·53+74	LobataLodge,MP
Duncan, Donald Theodore	Los Angeles	Phil. ‡ 90+67	503 Encina
[5]Duncan, Robert Fyfe Mein	Palo Alto	Geol. 13·88–10	1001 ForestCt.-p
Duncan, William Bryan	Fresno	M.E. 49+41	LobataL'dge,MP-mp
Dunker, Chrysella	Palo Alto	Ed.G.A. 180+61	755University-p
A. B., Stanford, 1921			
Dunker, Janice Annette	Palo Alto	Ed.G.A. 135+89	755 University-p
Dunn, Chauncey Homer, Jr.	Sacramento	Law gr.	Phi Gamma Delta
A. B., Stanford, 1919, J. D., 1912			
[23]Dunn,ChesterWm.	NewRichmond,Ind.	Math. 107+19	18 Encina
[4]Dunn,WilliamKinney	Spencerport,N.Y.	Educ. ‡	Encina
Dunn, William Wyly	Phoenix, Ariz.	Phyl. 163+45	Alexandria Hotel-p
[23]Durand, Harlan John	La Canada	LD 28+20	333 Kipling
Durant, Raymond Case	Los Angeles	M.E. 45·108+9	554 Encina
[12]Durkee,Andrew Franklin	SantaBarbara	M.E. 34·27–22	208 Encina

[4]Durst, Ethel Helena A. B., Stanford, 1912	Los Altos	Educ. gr.	Los Altos
[5]Durston, Wayne Alvin	Lodi	LD 34+8	Convalescent Home
Duryea, Philip Taylor	Palo Alto	Geol. 24·137+17	425 Encina
Duryee, Lawrence Matthews	San Diego	Chem. 81+13	636 Gilman-p
[1]Duthie, Roscoe Gibson	Pullman, Wn.	Law 41–20	Sigma Alpha Ep.
Dwight, Herbert McGilvray	Stanford U.	LD 48+57	Sigma Nu
Dwight, Marion Lorna	Stanford U.	Math. 141+169	Delta Gamma
[124]Dykes, Harlan Hebe	Atascadero	Law 104·21–11	AlphaTauOmega
Earl, Glen Mattox	Santa Monica	Geol. 80·50+44	231 Cowper-p
Easly, James Joseph	Long Beach	LD 51+43	356 Kingsley-p
[4]Eaton, Frances B. S. Oregon Agricultural College, 1919	Hollywood	Engl. gr.	200 Roble
Ebisuya, Kazuo	Iwakuni, Japan	M.E. 102+75	Japanese Club
Echols, Marian Norwood	Hartford, Conn.	Engl. 139+137	374 Kingsley-p
Eddelman, Wm. Smiley, Jr.	Martinez	Geol. 3·123+29	40 Encina
Eddy, Alice Leland A. B., Stanford, 1921	Brigham City, Utah	Econ. 48·137+192	220 Roble
[5]Edgar, Lucile Claire	El Centro	Ed.G.A. 103+63	Delta Gamma
Edmonds, Beatrice May A. B., Stanford, 1921	San Diego	Engl. 45·137+75	Pi Beta Phi
Edmonds, Raoul Leland	Los Angeles	M.E. 57·101+54	Theta Chi
Edwards, Gerald Jesse	Dallas, Ore.	Econ. 93+46	248 Encina
Edwards, Harry Jack	San Diego	Econ. 69+9	Phi Delta Theta
[5]Edwards, Muriel Emma A. B., Stanford, 1921	Wallace, Ida.	Med. gr.	284 Roble
Edwards, Orvil Dare	Chico	M.E. 65–5	446 Hamilton-p
Edwards, Robert Horatio, Jr.	Los Angeles	LD 45–5	Alpha Tau Omega
[4]Edwards, Roy Pierce	Palo Alto	LD	Mil. Acad.-p
Egami, Hubert Eziro A. B., Stanford, 1920, Engineer, 1921	Visalia	E.E. gr.	Japanese Club
Eggleston, Thomas Hubert	Emmett, Ida.	M.E. 73+4	303 Encina
Ehrhorn, Dorothy	Mountain View	LD 48+33	Mountain View-mv
Ehrhorn, Jack Macfarlane	Mt. View	LD 48+27	Mountain View-mv
Eiskamp, Ehler A. B., Stanford, 1918	Palo Alto	Med. gr.	2312 Webster, SF-sf
Eiskamp, Marguerite A. B., Stanford, 1920, A. M., 1921	Palo Alto	Chem. gr.	446 Forest-p
[12]Elgin, Robert A.	Madisonville, Ky.	LD 33+30	8 Dolores
[1]Ellingson, Gillain Elmer	Northwood, N.D.	LD ‡ 9–2	Zeta Psi
[4]Ellington, William Boyd		Educ. ‡	465 University-p
[5]Elliott, Daniel Walter	Stanford Univ.	Geol. 46·66–2	Theta Xi
Elliott, Edward Loomis A. B., Stanford, 1921	Pittsburgh, Pa.	Geol. 54·139+199	405 Encina

Elliott, Elmer Ellsworth, Jr.	Compton	Hist. 78–18	Phi Gamma Delta
Ellis, Charles Alden	San Francisco	M.E. 138+64	Delta Tau Delta
Ellis, Charles Edward	Berkeley	LD 33–1	249 Encina
Ellis, William Unger	Eureka	Chem. 10·80+117	207 Encina
[5]Ells, Harry Arthur	Bellingham, Wn.	Geol. 139+11	Alpha Tau Omega
Elmendorf, Eleanor J.	San Francisco	LD 31+34	Alpha Omicron Pi
Elmore, Garrett Henry	Palo Alto	Lat. 22·65+108	Kingscote
[5]Elsey, Caryl Lucile A. B., Stanford, 1921	Kansas	Ed. gr.	216 Roble
[1]Elwood, Ernest Anthony	Ukiah	Law 20·42+10	301 Encina
Ely, James Northcutt	Phoenix, Ariz,	LD 45+12	Sigma Nu
Emahiser, Robert Merritt	LaGrande,Ore.	LD 26–16	Alpha Sigma Phi
[12]Emanuel, Josephine E.	San Francisco	LD 5–24	320 Roble
[5]Emery, Allen Lee A. B., Stanford, 1921	Portland, Ore.	Law gr.	601 Webster-p
[5]Emmerson,TheodoraG.	CañonCity,Colo.	Engl. 67·98+168	160 Roble
Engle, Arthur John A. B., Stanford, 1921	Wellington, Kan.	Econ. 135·46+44	581 Forest-p
English, Harlow DeWolfe,Jr.	Lindsay	LD 45+26	235 Encina
[23]Enos, Lawrence Marcel	SantaMaria	LD 22·30+28	35 Sequoia
[5]Enright, James Robert	Santa Cruz	Zool. 63+81	31 Encina
Enright, Margaret Mary	Santa Clara	Hist. 40·128–1	1588Liberty,SC-sc
Ensz, John B. A., Bethel College, 1914	Mayfield	Educ. gr.	Mayfield
[12]Eremievsky, Serge A.	Petrograd,Russia	Engl. 117+74	Escondite Cottage
[1]Erich, Reuben Robert	San Jose	M.E. 34+5	546 N. 4th, SJ-sj
[4]Erickson, Arthur Samuel A. B., Stanford, 1919	Los Altos	Educ. gr.	Los Altos-la
Erickson, Paul Ferdinand A. B., Stanford, 1921	Kingsburg	Law 182+224	544 Encina
Erickson, Vance Bryant	Kalispell, Mont.	LD 47+14	327 Emerson-p
[1]Ernst, Helen Frances	Nampa, Ida.	LD 4–10	171 Roble
Esgen, Wienand Kelly A. B., Stanford, 1921	Los Angeles	M.E. 183+100	AlphaTauOmega
[4]Estabrook, Winifred F.	Los Gatos	Educ. 67·22+18	200 Roble
[23]Estcourt, Vivian F. G.	Berkeley	M.E. 106·27+4	420 Encina
Estus, Mildred Margaret	Palo Alto	Lat. 139+206	920 Scott-p
[4]Eva, James Meredith	Redwood City	LD	Redwood City
Evans, Daniel Webster	San Bernardino	Law 49·130+42	209 Encina
[23]Evans, Evelyn Kathleen	Riverside	LD 21·28+10	274 Roble
[13]Evans, Fred Shirey	Palo Alto	LD 24–5	413 Emerson-p
Evans, Hugh Raymond A. B., Stanford, 1919	Dillon, S.C.	C.E. gr.	635 High-p

[5]Evans, Mark Howard	MintoBridge,Y.T.	Geol. sp. 155–9	425 Encina
Evans, Wardwell D.	San Bernardino	Econ. 92+35	209 Encina
Evans, William Cary	Riverside	Econ. 35·104+71	Beta Theta Pi
Evenson, Clarence Roy	Clatskanie, Ore.	Pol.S. 137+35	543 Encina
Evenson, Franklin F.	Clatskanie, Ore.	E.E. gr.	543 Encina
A. B., Stanford, 1920, Engineer, 1921			
[5]Everett, Earl Alexander	Mullen, Nebr.	Law gr.	25 Salvatierra
A. M. Nebraska, 1919			
[4]Evers, Wendell A. G.	Biggs	LD	358 Encina
Ewell, Catherine D.	CañonCity,Colo.	LD 44+76	181 Roble
Ewing, Sydney Clement	Bedford, Engl.	Geol. 89+87	32 Sequoia
Eyer, Clarendon Bennett, Jr.	LosAngeles	Chem. gr.	Phi Gamma Delta
A. B., Stanford, 1921			
[34]Eyre, Mary Brooks	Denver, Colo.	Psych. 12+15	279 Roble
Fablinger, James Brown, Jr.	Campbell	Econ. 5·149+97	328 Encina
Fairchild, Donald R.	Stanford Univ.	Econ. 3·178+9	Kappa Sigma
A. B., Stanford, 1921			
Fairchild, Nellie Irene	Bertrand, Nebr.	Fr. 86+40	280 Roble
Falk, Curtis Lane	Eureka	Phyl. 93+45	Delta Upsilon
[23]Fall, John Gilbert	Los Angeles	Law 42·65–9	Alpha Tau Omega
Farish, Edward Tilghman	San Diego	Geol. 51+12	33 Sequoia
Farish, Linn Markley	Woodland	Geol. 58+15	Kappa Sigma
[5]Farley, Fred Long	San Jose	Greek gr.	65 Singletary, SJ-sj
A. B., Albion College, 1907, A. M., 1911			
[23]Farley, Raymond Mervy	SanFrancisco	LD 33+19	205 Encina
Farmer, Edward McNeil	Alhambra	Ed.G.A. 91+117	556 Encina
[1]Farnsworth, George Willis	Porterville	Econ. 137–37	Delta Chi
Faulds, John	Sunnyvale	Educ. 90·95+42	68 Sequoia
A. B., Stanford, 1921			
[4]Faulkner, Robert Nelson, Jr.	San Mateo	LD	San Mateo-sm
Faus, Ione Beryl	Lindsay	LD 44+71	164 Roble
Faville, David Ernest	Portland, Ore.	Econ. 160+195	306 Encina
Faville, Richard Wm.	Portland Ore.	M.E. 89+19	Beta Theta Pi
[134]Fearney, Emily Esther	Hollywood	Engl. 33·154–6	437 Kipling
Fehren, Fred Gerichs	San Jose	Econ. 61·91+18	119 Encina
[4]Fellows, Edith May	Neodesha, Kansas	Educ. ‡	361 Roble
Fendler, Harold Altman	Los Angeles	Hist.-Law 146+100	230 Encina
[4]Fennemore, Richard M.	Phoenix, Ariz.	LD	207 Encina
Fenimore, William Eugene	Carthage,Mo.	Engl. 83·42+34	527 Everett-p
[1]Fennell, John Vincent	Eureka, Utah	Geol. 47–33	Theta Xi
Fenner, Beatrice Alethea	Palo Alto	Math. 67·47+58	270 Kellogg-p
[1]Fenton, Eugene William	Yankee Jims	LD 6–7	347 Encina
[3]Fenton, Frank L.	Santa Rosa	Engl. 84·15+12	210 Encina

[23]Fenton, Norman A. M., Harvard, 1918	New York, N.Y.	Educ. gr.	461 Encina
Fernish, Charles A. A. B., Stanford, 1921	Santa Clara	Chem. 59+132	338 Encina
Field, John, 2d	Philadelphia, Pa.	Chem. 96+121	715 Bryant-p
[2]Field, William Richards	San Jose	Phil. 92·0+0	395 S.3d, SJ-sj
Files, Earl Lufkin	Monterey	C.E. 50–21	403 Encina
[34]Filipiak, Anthony A.	Pittsburgh, Pa.	Pre-L. ‡ 0–9	406 Ramona-p
[5]Filley, Edward Prior	So. Pasadena	Geol. 5·138+3	Zeta Psi
Findley, Frank Miller	Palo Alto	LD 32–16	Zeta Psi
Fish, Frances Cecilia	Palo Alto	Span. 82+23	308 Lincoln-p
Fish, Lounsbury Slaght A. B., Stanford, 1921	Palo Alto	C.E. 182+132	308 Lincoln-p
Fishburn, John Eugene, Jr.	Los Angeles	LD 47+43	Delta Kappa Epsilon
[4]Fishburn, Josephine R.	Cincinnati, O.	Fr. ‡	342 Homer-p
[4]Fisher, Beverly H.	San Francisco	Bact.	805 Channing-p
[234]Fisher, Frederic Russell	Manila, P.I.	LD 31+47	Delta Upsilon
[1]Fisher, Mary Elizabeth A. B., Colorado Teachers' College, 1918	Akron, Colo.	Educ. gr.	627 Bryant-p
Fisher, Ross Clark	Spokane, Wn.	Econ.-Law 4·148+159	A. Del. Phi
Fisher, William Lyle	Coalinga	Econ. 45·38+45	53 Sequoia
[124]Fleischman, Charles C.	San Francisco	LD 29+7	502 Encina
Fleming, Robert Carlile	Lincoln	Hist. 85+10	Theta Chi
Fletcher, Charles Gross	San Diego	LD 43–3	Phi Delta Theta
[12]Flippen, Virginia Parker A. B., Stanford, 1921	Orange	Bact. 46·137+65	1048Union,SF-sf
Flood, Randolph G. A. B., Stanford, 1918	San Francisco	Med. gr.	2601 Filbert, SF-sf
Flood, Raymond Oliver	San Francisco	LD 50+24	Phi Delta Theta
[234]Florcken, Herbert Gerdts	Palo Alto	LD 33+49	601 Webster-p
[5]Flower, Roswell Swift	Los Altos	LD 24+5	324 Encina
[1]Flowers, Esther May	Monrovia	Ent. 83+21	Kappa Alpha Theta
Follett, Zula Myrtle A B., California, 1920	Runnymede	Engl. gr.	Runnymede-p
[5]Follis, Donald Charles	Stanford Univ.	Chem. sp. 4·62+30	230 Encina
Ford, Clifford McDermont A. B., Stanford, 1921	Fullerton	Econ. 96·84+46	315 Encina
[12]Ford, Horace Elmer A. B., Stanford, 1921	Fullerton	Hist. 184+2	315 Encina
Ford, James Marion	Kalispell, Mont.	LD 37–2	216 High-p
[5]Ford, Marjory Gibb	San Francisco	Zool. 71·102+71	Sigma Kappa
[12]Ford, Robert Martin	Lamar, Colo.	Geol. ‡ 12–14	543 Byron-p
[14]Forney, Ross Arthur	Fresno	Econ. 23–8	Alvarado Hall

Forster, Albert	Stanford Univ.	Geol. 91+63	Theta Xi
[4]Forster, Donald Francis	Watsonville	LD	39 Encina
[1]Forster, James Tobias	San Bruno	Econ. sp. 41+14	459 Hamilton-p
[4]Fort, Lois	Los Angeles	LD	315 Roble
Fortson, Gordon Russell A. B., Washington and Lee, 1910	Homer, La.	Med. gr.	2325Sacramento,SF-sf
[4]Foster, Frances	Stanford Univ.	LD	Madroño Hall
[4]Foster, Homer	Anaheim	Pol.S. gr.	Encina
Foster, Walter Blair	San Francisco	LD 41+0	Zeta Psi
[4]Fox, Edna Bell	Palo Alto	LD	445 Hamilton-p
[5]Fox, Leo Sanor	Los Angeles	Geol. 24·59+14	Sigma Chi
[13]Frame, Paul Warren A. B., Washington, 1916	Vancouver,Wn.	Med. gr.	2329Sacramento,SF-sf
Frankenheimer, Bernard Jos.	Stockton	Econ. 146+82	121 Encina
Frankenheimer, Bernice	Stockton	Engl. gr	316 Roble
[1]Franklin, Altharetta Belle	Carpinteria	Engl. 40–27	Roble
Franklin, Anna Comstock A. B., Stanford, 1920	StanfordUniv.	Med. gr.	1436 7th Ave., SF-sf
[12]Franklin, Charles Scott	StanfordUniv.	Geol. 73+18	Mirada Ave.
Franklin, Geraldine	Carpinteria	LD 44–1	354 Roble
Franklin, Josephine	Carpinteria	LD 44+4	356 Roble
Franklin, Lloyd Jackson	SanBernardino	M.E. 140+5	Theta Chi
Franklin, Walter King	SanBernardino	M.E. 148+34	Theta Chi
[5]Fredericks, Charles Edwin	LosAngeles	LD 13–1	Sequoia
Fredericks, John D., Jr.	Los Angeles	Phyl. 3·67+20	Alpha Delta Phi
Frederickson, Frederick R.	Los Gatos	Econ. 101+48	Alpha Sigma Phi
[4]Freeman, Cora Bagley A. M., Columbia, 1917	Los Angeles	Educ. gr.	161 Roble
Freeman, Edwin Robert A. B., Stanford, 1921	Corona	Econ. 182+39	Theta Chi
French, Samuel Wilcox	Ashtabula, Ohio	M.E. 96+82	42 Encina
[1]French, William Oscar, Jr. A. B., California, 1920	Oakland	Med. gr.	327 Encina
[4]Frink, Frederick William	Palo Alto	LD	Pacific Grove-pg
[2]Fritzschen, H. Wilhelm A. B., Stanford, 1921	San Francisco	Med. gr.	718 Bryant-p
[1]Frolli, Winfred Romeo	San Jose	Hist.-L23·60+41	228W.St.,SJ-sj
[4]Fromberg, Carolyn F.	San Francisco	LD	166 Roble
Frost, Edward Gibson	Los Angeles	Econ. 9·49+5	Alpha Sigma Phi
[1]Fry, Paul Dwight	Prosser, Wn.	Econ. 50·15+17	136 Encina
Frye, Verde Emory	Redondo Beach	LD 42–2	133 Middlefield-p
[1]Fujimoto, Tadao A. B., Stanford, 1921	Iyo, Japan	Econ. 24·156+267	Japanese Club

Fuller, Frank Wastie, Jr.	San Francisco	LD 41+22	DeltaKappaEpsilon
Fuller, Lon Luvois	El Centro	Econ. 53·40+34	Delta Chi
Fullerton, Dick Phelps, Jr.	SanFrancisco	LD 46+16	Beta Theta Pi
[5]Fullerton,HughThompson	SanFrancisco	Law 145–18	Beta Theta Pi
Furui, Shungo	Japan	E.E. gr.	Japanese Club
A. B., Stanford, 1921			
Gage, Daniel Dudley, Jr.	Los Angeles	LD 47+48	122 Encina
Gage, William Richard	Los Angeles	LD 43+4	122 Encina
Gagos, Kenneth A.	San Francisco	Chem. 101+74	Hotel Palo Alto
[4]Gallagher, E. D.	Frankermuth, Mich.	Educ. gr.	621 Kingsley-p
[5]Gallagher,ThomasArthur	StanfordUniv.	Econ. 90·50+36	Sigma Alpha Ep.
[5]Gallegos, Percy Beales	Palo Alto	Med. gr.	905 Scott-p
A. B., Stanford, 1921			
Galliano, James Frank	Oakland	Law gr.	659 Melville-p
A. B., LL. B., Stanford, 1921			
[12]Gamsby,RuthSterling	Bridgeport,Conn.	Educ. gr.	147 Emerson-p
A. B., Mount Holyoke, 1906			
[12]Gandy, Richard Karl	Riverside	Econ. 122·63+48	Delta Chi
A. B., Stanford, 1921			
[12]Gardner, Anna Margaret	Whittier	Hist. 35·145+106	Delta Gamma
A. B., Stanford, 1921			
[3]Gardner, Dorothy	Stanford Univ.	Fr. 52–11	1A Alvarado
Gardner, James Blaine	San Francisco	Econ. sp. 63+24	128 Encina
Gardner, Kenneth Drake	Oakland	Pre-Med. 92+75	245 Encina
[124]Garland, Ruth	Ojai	Med. gr.	Delta Gamma
A. B., Stanford, 1920			
[3]Garrett, Arthur	Hollywood	Engl. 33+29	Alpha Delta Phi
Garrett, Milan Wayne	El Paso, Texas	Chem. gr.	45 Sequoia
A. B., Stanford, 1920			
[5]Garth, William LeRoy	Beaumont, Tex.	Pre-Clin. 114·54+12	831 Bryant-p
[5]Garvin, Priscilla Ash	Billings, Mont.	Econ. 134+66	Kingscote
[4]Gates, Harry Phelps	Los Angeles	Law ‡	137 Encina
[4]Gayman, Warren Wesley	Ojai	Phys. gr.	352 Encina
B. S., University of Chicago, 1913			
[2]Gazley, James Clyde	Gazley, Ore.	M.E. sp. 38–14	127 King,RC
Genereaux, Raymond Paul	SanFrancisco	LD 36–4	Phi Kappa Psi
Gentry, Harold Goodman	Redlands	Phyl. 47·109+91	11 Sequoia
George, Dorothy Marian	La Crescenta	Econ. 40·140+179	200 Roble
A. B., Stanford, 1921			
George, James Morrille	San Francisco	Med. gr.	2251 Steiner, SF-sf
A. B., Brigham Young, 1912			
Gerken, Elon Edward	Canutillo, Tex.	Econ.-L.34·142+14	359 Emerson-p
Gerson, Lowell Woodruff	Los Angeles	Econ. 140+85	Alpha Delta Phi
[4]Gesell, Robert Remington	SanFrancisco	Educ.	466-23d Ave., SF-sf

Getz, Laura M. A. B., Stanford, 1921	Hollywood	Bot. 67·113+29	DeltaDeltaDelta
[5]Geyer, Harold Clinton	Burley, Idaho	Law ‡ 12–1	Mayfield
Geyer, Henry Elmer	Burley, Idaho	M.E. 133+195	College Terrace
Ghrist, David Garrison A. B., Stanford, 1921	Ames, Iowa	Phyl. 29·151+75	Beta Theta Pi
[12]Gianini, Leo Gregory A. B., Stanford, 1921	San Francisco	M.E. 11·170+316	331 Encina
Gibbon, Thomas Edward, Jr.	LosAngeles	Phil. 9·108+90	Chi Psi
[4]Gibbons, Morton R., Jr.	San Francisco	LD	60 Encina
[24]Gibbs, Chester W. A. B., Stanford, 1920	Orcutt	Geol. gr.	Fillmore-f
[23]Gibbs, Marion Wallace	Pasadena	Span. 97+13	Kappa Kap. Gam.
[5]Gibson, Florian Greenleaf	Palo Alto	Geol. 54·70+28	1831 Waverley-p
Gibson, Russell Graves	Seattle Wn.	Econ. 72–12	90 Sequoia
Gibson, William Earl	Palo Alto	Geol. 56–6	1831 Waverley-p
[4]Gidal, Harry Bernard	San Francisco	Chem.‡	352 Encina
[5]Gilbert, James Cornelius	Spokane, Wn.	Geol. 60·105+169	71 Sequoia
[12]Gilbert, Warren K.	Stanford Univ.	Law 23·172–6	Delta Upsilon
Gilchriste, Frank Casper	San Mateo	Econ. 35–7	105 Tilton, SM-sm
[3]Gilchriste, Gladys	San Mateo	Engl. 24·60–7	15 Lasuen
[4]Gilger, Harry	Taft	LD	202 Encina
Gilkey, Wallace Alfred	StanfordUniv.	Chem. 5·151+48	College Terrace
[4]Gill, John A. B., College of Pacific, 1912	RedwoodCity	Phil. gr.	Redwood City
[5]Gill, Lake S.	Los Altos	Engl. 54·45+11	Los Altos-la
Gill, Roland Jerome	Spokane, Wn.	Econ. sp. 41–10	Alpha Delta Phi
[25]Gillen, James Simon	Sheboygan, Wis.	Pol.S. ‡ 32–6	261 Hawthorne-p
Gilliland, Edwin Gaylord	Olympia	M.E. 42–13	Kappa Alpha
[3]Gillis,Charlotte Raymond B. S., Minnesota, 1911	LosBanos,P.I.	Engl. gr.	Runnymede-p
[5]Gillis, Lindsay	Los Angeles	Pol.S. 30·80–15	Delta Kappa Ep.
Gilroy, Urban Burns	Marysville	C.E. 13·141+100	559 Encina
Gilson, Dorothy A. B., California, 1918	Glendale	Lat. gr.	467 Forest-p
Gimenez, Maximo Frias A. B., Stanford, 1921	Bataan, P.I.	Ger. 50·132+16	18 Alvarado
[4]Glann, Blanche Estella	Mt. View	LD	Mt. View-mv
Glenn, Charlotte Marian	Los Angeles	Fr. 73·83+153	307 Roble
[5]Glenn, Henry Luther	NewYork,N.Y.	Econ. 96·50+50	PhiGammaDelta
[5]Gobar, Franklin Harold	Fullerton	Pre-Clin. 135·37+46	266 Chan'g-p
[23]Goddard, Glenn Wm.	Carbondale, Ill.	Geol. 67·21+11	1335 Cowper-p
[5]Goddard, Philip Hubbard A. B., Stanford, 1921	LongBeach	Law 188+173	Alpha Sigma Phi

[4]Goggin, William A.	Manchester, N.H.	Chem.	305 Hamilton-p
Ph. B., Brown University, 1919			
Goldberg, Hazel Dene	Long Beach	Span. ‡ 40–1	203 Roble
[23]Goldie, Pirie Richard	Wilmington	LD 30–11	20 Sequoia
[23]Goldman, Robert Louis	San Francisco	LD 28+24	23 Encina
[5]Goldstein, Joseph	San Francisco	Med. gr.	2202 California, SF-sf
A. B., Stanford, 1919			
Goldstone, Abram Hirsch	Lewiston,Ida	Econ. 142+104	16 Encina
Goldwater, Jerrold Levy	Los Angeles	LD 45–12	119 Encina
[4]Goldworthy, George W.	Phoenix, Ariz.	LD	230 Encina
Gomes, Joseph Vincent	Campbell	Law 142+49	216 Encina
[12]Gonzales, Emile Baldwin	Dallas, Texas	LD 21–11	63 Sequoia
[5]Gonzales, Francisco Leopoldo	San Jose	Pre-Med.66·44–3	Claremont,SJ-sj
Goodman, Daniel Louis	Yakima, Wn.	Econ.-Law 143+242	538 Encina
Goodnow, Margaret J.	Alexandria, Va.	Hist. 84·98+121	252 Roble
A. B., Stanford, 1921			
[5]Goold, John Vernon	Morgan Hill	Ger. gr.	555 Encina
A. B., Stanford, 1920			
Gorman, William Harrington	Raymond	M.E. 141+100	Delta Chi
Gormley, Harriet	AtlanticCity,N.J.	Engl. 128+112	Delta Gamma
Gorrell, Leslie Ewing, Jr.	Palo Alto	LD 49+38	Sigma Alpha Epsilon
[2]Goudy, Clyde LeRoy	San Jose	Chem. 44–11	116 Fox, SJ-sj
[5]Gould, Howard F.	Fairmont, Minn.	Law 10·160+89	Beta Theta Phi
Goux, Estelle Katherine	SantaBarbara	Hist. 12·86+66	Chi Omega
[5]Goux, Julien Francis	SantaBarbara	Phil. 110+178	206 Encina
Gover, William Charles	Anderson	LD 39–7	Phi Gamma Delta
Grable, Goss Silas	San Jose	Hist. 145+136	502 Hull, SJ-sj
[4]Graham,Chalmers George	SanFrancisco	Law	Phi Delta Theta
A. B., Stanford, 1919			
[23]Graham, Frank Fremont	Palo Alto	LD 41·28+4	327 Cowper-p
[4]Graham, Grayson Bard	Los Angeles	LD	109 Encina
[4]Graham, Lena Lorene	Palo Alto	LD	327 Cowper-p
Graham, Henry Thomas	Tacoma, Wn.	Chem. 135·47+17	SigmaAlphaEp.
Graham, Malbone Watson, Jr.	Berkeley	Hist. gr.	545 Forest-p
A. M., California, 1920			
Granger, Neil P.	Orange	LD 43+10	Beta Theta Pi
[3]Grant, Dorothy Margaret	San Mateo	LD 14+9	Roble
Grant, Marjorie E. M.	Palo Alto	Econ. 120+31	315 Melville-p
[4]Gratz, Eleanor Victoria	San Jose	Educ. 108·54+48	100 Roble
[12]Graves, Dick Wedgwood	Ogden, Utah	Phil. 72+92	Phi Kappa Psi
[4]Graves, Jane Arnold	San Francisco	Educ.‡	
[12]Graves, John Dunbar	Hollywood	LD 31+24	Alpha Tau Omega
Gravestock, Warren Edward	Palo Alto	Econ. 88+40	R. F. D. 1-p

[4]Gray, Charles Sanford	Williams, Ariz.	LD	Encina
[13]Gray, Clarence Rolland	Pomona	Econ. 129·28–15	118 Encina
Gray, Earl Haskins	Petaluma	LD 27+1	334 Lincoln-p
Gray, Jesse Allen	Bristol, Tenn.	Geol. 15·64–3	Phi Kappa Sigma
Gray, Leslie George	Palo Alto	LD 45+38	643 High-p
Green, Albert Vernon A. B., Stanford, 1921	Pasadena	Econ. 127·54+16	410 Encina
[4]Green, Charles Nathan	Camp Bald	Educ.	Encina
Green, Copeland	Long Beach	M.E. 42·43+33	117 Encina
Green, Frances Myers	Glendale	Fr. 88+144	330 Roble
Green, George Robert	Palo Alto	Econ. 10·83–14	Delta Kappa Ep.
Green, Norman Boynton A. B., Stanford, 1921	Redlands	C.E. 187+104	Chi Psi
[1]Green, Thomas Edwards	StanfordUniv.	Econ. 66–2	13 Salvatierra
[4]Green, William Wiley A. B., Missouri, 1911	Oakland	Educ. gr.	910 Ramona-p
Greene, Harry Ashland, Jr.	Monterey	M.E. 60+52	72 Sequoia
[4]Greene, Helen Hartley	Columbia, Miss.	Zool. ‡	145 15th, PG-pg
Greene, Thomas G., Jr.	Portland, Ore.	Econ. 87+85	357 Encina
Greenwood, Donald Layton	LosAngeles	LD 32+0	Delta Kappa Epsilon
Greenwood, Sam		LD sp.	415 Florence-p
[1]Greer, Margaret A. B., Stanford, 1919	San Jose	Math. gr.	350 Prevost, SJ-sj
[5]Gregersen, Albert Ingstrup	Solvang	Geol. 7·63+88	525 Forest-p
[5]Gregersen, Halfdan Ingstrup	Solvang	Span. 36·66+110	525 Forest-p
Gregersen, Magnus Ingstrup	Solvang	Bot. 66+57	525 Forest-p
[12]Gregerson, Diamond E.	Fertile, Minn.	Econ. 1–9	Alvarado Hall
[234]Gregory, Elizabeth Jackson	Pasadena	Hist. 67+10	Sigma Kappa
Greppin, Ernest H.	Los Angeles	LD 32+3	Alpha Sigma Phi
[5]Griffin, Christopher John	FoxLake,Wis.	Educ. 76·39+20	19 Salvatierra
[5]Griffin, Frank Joseph	Redwood City	LD 36+36	400 Broadway, RC-rc
Griffin, Harold Park	Los Angeles	Econ. 35·121+23	316 Encina
[4]Griffin, Lyla Ruth	Salinas	LD	155 Roble
Griffith, Willard Clare	Upland	Econ. 70·94+71	PhiKappaSigma
Grill, Margaret Eleanor	Los Angeles	LD 47+24	167 Roble
Grinstead, Marion Owen	Palo Alto	Chem. 42·41–4	PaloAltoAcres-p
[4]Griswold, Gale Charles	Modesto	LD	203 Encina
Griswold, Hugh Harris	Modesto	Law 37·118+87	113 Encina
Grondona, Charles Arata	San Francisco	Chem. 106+28	Delta Tau Delta
[234]Gross, Richard Philip	San Francisco	LD 27+7	23 Encina
[124]Grossman, Sydney Sam'l	Los Angeles	Econ. 18·37+11	228 Encina
Grothe, Marion Ware	Wayne, Neb.	Span. 22·84–3	362 Encina

[1]Ground, Ray Granville	Independence, Ore.	Geol. 125–23	220 Encina
[4]Grover, Charles Clifford	Winslow, Ariz.	Educ. gr.	Madroño Hall
A. M., Denver University, 1914			
[4]Guerra, Carlos E. P.	Palo Alto	LD	611 Bryant-p
[23]Guevara, Joseph	San Francisco	LD 14–10	39 Sequoia
Gunter, Clyde Elton	Fresno	Econ. 139+160	17 Encina
Gunther, Chester Oliver	Portland, Ore.	LD 46–13	Beta Theta Pi
Gunther, Marie Agnes	San Francisco	Econ. 79+2	248 Roble
[23]Gurley, Lee Sivley	Redwood City	M.E. 104+14	Sigma Nu
Gustus, Edwin Lysle	Calgary, Can.	Chem. 45·144+97	238 Encina
A. B., Stanford, 1921			
Haberfelde, Clarisse Ruth	Bakersfield	Econ. 73·90+39	Gamma Phi Beta
[5]Haberfelde, Edmund Carl	Bakersfield	Econ. 114+37	Phi Gamma Delta
[3]Hackett, David True	Palo Alto	LD 13–2	701 Middlefield-p
[124]Hackett, Durlin Bates	Palo Alto	Econ.-Law 50·73+13	105Byron-p
Hackett, George Anthony	Palo Alto	LD 48+22	219 Homer-p
[23]Hackett, Russell Graham	Spokane, Wn.	C.E. 15·48–3	Delta Kappa Ep.
[4]Hadley, George Charles	San Francisco	LD	27 Encina
[1]Hahir, Hugh Ward	Redwood City	LD 7–9	518 Stambaugh, RC-rc
[1]Hahir, Joseph Patrick	Redwood City	M.E. 11–1	518Stambaugh, RC-rc
Hahn, Young D.	Dinuba	Chem. 34–2	139 Encina
[1]Haig. T. Raymond	Oakland	Med. gr.	2136 Pacific, SF-sf
A. B., Stanford, 1918			
Haist, Helen Eugenia	Fresno	Span. gr.	219 Roble
A. B., Stanford, 1920			
Haizlip, Raymond	Portland, Ore.	Econ. 42·90+55	PhiGammaDelta
Hale, Marshal, Jr.	San Francisco	LD 44–7	Sigma Nu
Hale, Newton Johnston	Ross	LD 31–29	SigmaAlphaEpsilon
[23]Hales, Walter H.	Leduc, Alta., Can.	M.E. 46·50+39	323 Encina
[5]Haley, Bernard Francis	Los Angeles	Econ. 45·114+202	21 Sequoia
Haley, Cecil Irving	San Jose	LD 48+8	Theta Delta Chi
Haley, Melvin Collins	San Jose	C.E. 186+42	Theta Delta Chi
A. B., Stanford, 1921			
Hall, Anne M.	San Mateo	Bact. 45·141+78	1849 J'ks'n, SF-sf
A. B., Stanford, 1921			
Hall, Donald James	Omaha, Neb.	Econ. sp. 93+25	Phi Kappa Sig.
Hall, Dorothy	Santa Barbara	Fr. 184+144	363 Roble
A. B., Stanford, 1921			
Hall, Eleanor Hammond	San Mateo	LD 42+13	364 Roble
[4]Hall, Elizabeth Pierson	Los Altos	LD	Los Altos-la
[124]Hall, Ernest Mosiah	St. George, Utah	Bact. gr.	616 Forest-p
A. B., Brigham Young, 1905, M. S., Washington, 1916			
Hall, George William	Pasadena	Econ. 72+109	Alpha Delta Phi
A. B., Stanford, 1921			

[4]Hall, Giles Stark	Los Angeles	LD	316 Encina
Hall, Helene Marie A. B., Stanford, 1920	San Mateo	Span. gr.	Sigma Kappa
Hall, James Hinquong A. B., Stanford, 1919	Kwangtung,China	Med. gr.	2215 Pine, SF-sf
[4]Hall, John	Los Angeles	LD	200 Encina
Hall, Mildred Jessica	San Francisco	Chem. 91+89	319 Roble
[4]Hall, Robert Robbins	Nevada City	LD	20 Encina
[34]Hall, Warren J.	Watsonville	LD 10–15	418 Encina
[1]Hall, William Louis	Palo Alto	LD 3–12	304 Waverley-p
[4]Ham, Allen Martin B. A., College of Pacific, 1919	San Jose	Educ. gr.	90 Randol, SJ-sj
Ham, Anne Elizabeth A. B., Stanford, 1921	Los Gatos	Econ. 84·96+49	101 Roble
[4]Hambleton, Frances F. A. B., Stanford, 1920	Palo Alto	Educ. gr.	1027 Bryant-p
Hamilton, Ernest	Pasadena	M.E. 92+72	Beta Theta Pi
Hamilton, Harold Pierpont	LosAngeles	Zool.-Med. 127·44+1	101 Pope
Hamilton, Kenneth Howard	Westley	LD 38+6	1004 Emerson-p
Hamilton, Ray Leeroy	Delano	Chem. 147+96	419 Encina
Hamlin, Harris Howard	Los Angeles	Law 69·79+0	SigmaAlphaEpsilon
Hamlyn, Thomas Joseph A. B., Stanford, 1921	San Francisco	Min. gr.	Beta Theta Pi
[4]Hammon, Dwight Edward	Biggs	LD	358 Encina
Hancock, Velda	San Jose	LD 80–24	Alpha Omicron Pi
[4]Handley, William H. A. B., College of Pacific, 1919	Yreka	Hist. gr.	542 Cowper-p
[4]Hanna, Alma B. A., Rice Institute, 1919	Houston, Texas	Chem. gr.	323 Roble
[23]Hanner, John Flint	San Jose	Econ. 67·86+36	997 E.Julian,SJ-sj
[1]Hanrahan, Marshall Shannon	PaloAlto	LD 4–14	1022 Waverley-p
[4]Hansell, Elran Amos	Fortuna	LD	18 Encina
[5]Hansen, Hazel Dorothy A. B., Stanford, 1920, A. M., 1921	San Mateo	Greek gr.	402 Tilton, SM-sm
[4]Hansen, Natalie	San Jose	LD	312 Stambaugh, RC-rc
[22]Hanson, Frederic Dooley	Chicago, Ill.	LD 22·33+40	204 Encina
[5]Harcourt, Irl Roy	Fresno	M.E. 48+45	364 Encina
Harcourt, William Ernest	Millers, Nev.	LD. 45+17	84 Sequoia
Hard, Burton S.	Ripon	LD 35+1	Alpha Tau Omega
[34]Hardwick,PerryEmerson A. B., California, 1920	SanFrancisco	Law gr.	229 Steiner, SF
Hardwicke, Kenneth Charleton	Fresno	LD 46+25	Alpha Kappa Lambda
Hardy, Anne A. B., Stanford, 1921	San Diego	Psych.5·181+266	KappaK.Gam.

[4]Hardy, Mary B. A. B., Michigan, 1912	Susanville	Hist. gr.	244 Roble
Hare, Dorothy	Salinas	Econ. 149+109	Alpha Phi
Harger, Donald K.	Riverside	LD	114 Encina
[4]Hargrave, Edgar J.	Yorba Linda	LD	42 Encina
Harker, Charles Andrew	San Jose	C.E. 21·108+16	ThetaDeltaChi
Harker, Edgar Louvau A. B., Stanford, 1921	Oakland	Chem. 85·95+16	345 Encina
Harker, James Broadbent	Los Angeles	LD 48+26	62 Sequoia
[23]Harman, George S.	San Francisco	LD 24+1	410 Encina
[1]Harper, Charles Phillips	Los Angeles	Engl. ‡ 16–4	Delta Chi
[13]Harper, Edward Baldwin	Balboa	Law 32·98+27	LosAltos-la
Harper, William Alexander A. B., Stanford, 1921	SantaCruz	Econ. 61·128+53	Phi Kappa Sig.
[4]Harrell, Lorimer B.	Merced	LD	10 Encina
[4]Harrington, Helen Ruth B. S., Oregon Agricultural College, 1919	SantaFe,N.M.	Phys. gr.	1013 Ramona-p
Harris, Edwin Loring	San Francisco	Chem. 22·47+31	Delta Tau Delta
[4]Harris, David W. C.	West. Texas	LD	106 Encina
Harris, Helen Estelle	Los Angeles	Econ. 87+16	KappaKappaGam.
[1]Harris, Melville David A. B., Stanford, 1921	Modesto	Econ. 82·103+53	448 Encina
[5]Harris, Richard Charles	Long Beach	Geol. 102·44+37	Zeta Psi
Harrison, Edna Alice A. B., Stanford, 1921	Los Angeles	Sch. Ed. gr.	353 Roble
Harrison, George Russell	Halcyon	Phys. gr.	Reservoir Drive
[1]Harrison,LaurenceErnest	SanFrancisco	Bact. 3–22	11 Salvatierra
Hartley, James John	Napa	Geol. 58–16	651 University-p
Hartley, Wilder Wellington	Terminal	LD 32–31	Mountain View-mv
[1]Hartman, Barnard Wilson A. B., Stanford, 1920	Palo Alto	Law gr.	315 Everett-p
[5]Hartman, Hans A. B., Stanford, 1921	Crockett	Med. gr.	Theta Delta Chi
[5]Hartman, Richard Homer	Palo Alto	M E. 31·139+45	313 Everett-p
Hartranft, S. Glenn	Fullerton	LD 44–12	Kappa Sigma
[4]Hartwig, George H. A. B., Stanford, 1913	Northfield,Minn.	Engl. gr.	Stanford Union
Hartzell, Lucie Eloise	Los Angeles	LD 42+8	147 Roble
[1]Harvey, Allan Joshua	Adin	Hist. ‡ 10–14	114 Circle-p
Harvey, Harold Dudley	Adin	LD 30–18	Box 551, MP-mp
[1]Harvey, Harold Van	Adin	LD 0–12	114 Circle-p
Harzfeld, Arthur Jerome A. B., Stanford, 1920	SanFrancisco	Law gr.	423 Encina

Hashimoto, Tadaichi	Yamaguchi, Japan	Chem. 77+18	Japanese Club
[12]Haskell, Llewellyn Gilmore **A. B., Stanford, 1921**	Berkeley	C.E.135·83+58	537 Encina
[23]Hastings, Mary Alice A. B., Smith College, 1916	Cairo, Ill.	Sch. Ed. gr.	209 Roble
Hauge, Helen Cree	Long Beach	Engl. 46·88+42	Pi Beta Phi
[2]Havenor, Harry Samuel	Willows	Econ. 31+12	Hotel Alexandria-p
Hawes, John Raymond	San Jose	Chem. 4·112+140	125Frem't,SJ-sj
Hawkenson, Edna	Stanford Univ.	Econ. 135+118	218 Roble
Hawkins, Sidney William	Dayton, Ohio	LD 43+55	374 Roble
[23]Hawkins, Stanley L.	Mountain View	LD 24–3	Mountain-View-mv
Hawkins, Wayne Lee	Mountain View	Pol.S. 67–18	MountainView-mv
Hawley, James Leroy	Palo Alto	M.E. 84+66	457 Bryant-p
Hawxhurst, Roberta	San Francisco	Engl. 23·96+137	Alpha Phi
[12]Hayden, George Bertram	Tacoma,Wn.	LD 14–24	Sigma Chi
[12]Hayes, Gordon Bruce	Saratoga	Bact. 12·42+26	Saratoga-s
Hayes, Jay Orlo, Jr.	San Jose	Econ. 89+11	Phi Delta Theta
[13]Hayes, John Campbell	Pasadena	LD 21–2	224 Encina
[234]Hayfer, Paul	San Francisco	Pre-Med. ‡ 18–16	236 Encina
Hayne, Wm. Alston Bourn	SanFrancisco	Geol. 89+53	502 Encina
[3]Hays, George P.	Palo Alto	LD 14+5	661 Waverley-p
Hays,HarfordH. Medicine	Hat,Alta.,Can.	LD 43+1	825 University-p
[12]Hays, Paul Raymond	San Mateo	LD 16+24	421 Crescent, SM-sm
Hays, Samuel Ewing	Palo Alto	C.E. 10·164+21	350 Encina
[4]Hays, Silas Woodson	Palo Alto	LD	412 Kipling-p
[3]Hays, Walter Grant	Palo Alto	LD 15+17	661 Waverley-p
[4]Hazeltine, Karl Snyder A. B., California, 1914	Sunnyvale	Educ. gr.	Sunnyvale-s
[5]Hazeltine, Matthew Emery B. S., California, 1916	San Jose	Chem. gr.	596 S. 10th, SJ-sj
[234]Healton, Ivan Freeman	La Habra	Span. ‡ 30–7	105 Emerson
Heater, William Earl	Ritzville, Wn.	Geol. 75+4	Phi Kappa Psi
[5]Heath, Phyllis Thoburn	Palo Alto	Econ. 15·80+83	1147 Ramona
Heath, Ronald Wayland	Palo Alto	C.E. 25·179+41	Phi Delta Theta
[2]Heathcote, James Gerard	Hanford	Econ. 90·78–26	2248Telegraph,B
Heaton, Norris P.	Paso Robles	Econ. 46·39–5	109 Encina
Heckendorf, Percy Chas.	Santa Barbara	Econ. 92+30	44 Encina
[234]Hedges, Amelia Louise	Pullman, Wn.	Pol.S. 135·29+44	357 Roble
Hedrick, Marion Iola A. B., Mills College, 1920	Merced	Engl. gr.	912 Scott, SC-sc
[4]Heffelfinger, Maurece M.	Pasadena	LD	Roble
Heffernan, John James A. B., Stanford, 1921	Syracuse, N.Y.	Econ. 135·47+47	404 Encina

[23]Heine, Wesley Meredith	Los Angeles	Econ. ‡ 22–11	Alpha Sigma Phi
[5]Hellbaum, Walter F. A. B., Stanford, 1921	Spokane, Wn.	Educ. gr.	330 Encina
[4]Hellmann, James G. (Mrs.) B. A., Wellesley, 1914	Woodside	Engl. gr.	Woodside
[5]Hellwig, Erle Edward	Mount Eden	Econ. 41·114+2	Kappa Sigma
[5]Helmick, John Nathaniel A. B., Oklahoma, 1917	Florence, Ariz.	Law gr.	11 Salvatierra
[1]Helser, Charles Willard, Jr.	Oakland	Pol.S. 59+44	Sigma Nu
[4]Helser, John Henry	Piedmont	LD	236 Encina
[4]Henderson, Alexander D.	Berkeley	Geol.	Sigma Alpha Epsilon
Henderson, James Gordon	Los Angeles	P.-C.135·47+17	W.W.Sch.,M P-mp
[14]Henderson, James Ralph	StanfordUniv.	Econ. 88+99	3 Sequoia
Henderson, Paul Fleming	Spokane, Wn.	C.E. 109+76	349 Encina
[1]Henderson, Paul Leroy	Greeley, Colo.	Geol. 18·67–13	Theta Delta Chi
[4]Henderson, Virginia June	Los Angeles	LD	248 Roble
Henderson, Ynez Marie	Campbell	Bot. 138+135	Sigma Kappa
[5]Hendrick, Roy Wesley	Palo Alto	Educ. 90·51+38	327 Webster-p
[4]Hendrickson, Carl E. A. B., Minnesota, 1920	Minneapolis, Minn.	Educ. gr.	559 Cowper-p
[4]Hendrix, Herman Elert A. B., Northwestern, 1901	Mesa, Ariz.	Educ. gr.	612 Waverley-p
[12]Henry, Wilbur Amos	Los Angeles	Law 21·82+17	Zeta Psi
[5]Hensold, Gaylord Wm.	Stanford Univ.	Econ.-Law 45·111+93	219Encina
[4]Hepburn, Samuel A. B., Indiana, 1916	Bloomington, Ind.	Hist. gr.	Los Altos
[4]Hepp, Louis Oscar A. B., Willamette, 1917	Woodburn, Ore.	Chem. gr.	Runnymede
[124]Herkman, Paul Veillat	Palo Alto	Fr. sp. 35+35	636 Gilman-p
Herndon, Arthur Herbert	SanFrancisco	M.E. 99·47+59	15 Encina
[5]Heron, Ivan Clyde A. B., Stanford, 1919	Watsonville	Med. gr.	3732 Sacramento, SF
[23]Herrington, Dorothy F.	Ogden, Utah	Fr. ‡ 32+32	308 Roble
[12]Herrington, Fred S. A. B., Stanford, 1921	Ogden, Utah	Law 180+107	Delta Chi
Hertel, Francis Westerfeld A. B., Stanford, 1921	Pasadena	Geol. 185+50	Zeta Psi
[4]Herzog, Maxine Leona	San Francisco	LD	307 Roble
[5]Hesselmeyer, Clarence T.	Mayfield	M.E. 58+94	Park Blvd., M-m
[4]Hester, Berthena M. A. B., Michigan, 1903	Mt. View	Pol.S. gr.	Mt. View-mv
[4]Hester, Willis Elston B. S., Colorado, 1905	Mt. View	Educ. gr.	Mt. View-mv
Hesthal, Cedric Edward	SanFrancisco	LD 39+24	38 Sequoia

[5]Heublein, Clarence M. A. B., Wisconsin, 1918	Fox Lake, Wis.	Law gr.	19 Salvatierra
Heupgen, Claude Mon's School of Mines	Mons, Belgium	M.E. gr. 45-35+0	548 Encina
[1]Hevener, Ruth Clara A. B., Stanford, A. M., 1921	Sacramento	Bot. gr.	318 Roble
[4]Hevey, Edward, Jr.	Brentwood	LD	332 Encina
[4]Hewett, Lucile B. S., California, 1903	Alameda	Educ. gr.	353 Roble
Hewitt, Mary Elizabeth A. B., Stanford, 1921	San Jose	Bact.-Med. 180+134	301 Roble
[5]Hey, Clifford Lester	San Mateo	LD 41–6	Kappa Sigma
[1]Hiatt, William Goodrell	Peres	LD 16+7	9 Sequoia
Hichborn, Paul Revere A. B., Stanford, 1921	Santa Clara	Bot. 180+46	250 Encina
[34]Hicks, Charles Roger A. B., Clark College, 1915	Los Gatos	Hist. gr.	104 Wilder, LG-lg
[2]Hicks, James Ernest	Pasadema	Econ. ‡ 23–21	432 Encina
Hicks, James Herndon	San Diego	Chem. 102+64	Chi Psi
Higby, Myron Claude	Los Angeles	Econ. 101+16	Alpha Sigma Phi
[4]High, Vera	Modesto	LD	Roble
Higgins, Clyde Randolph	Redwood City	M.E. 88+38	R.F.D.34, RC-rc
[12]Hihn, Hugo E.	Long Beach	Econ. sp. 14–27	
[4]Hiles, Leta Severance	Long Beach	LD	309 Roble
Hill, Elinor Walker	La Jolla	Chem. 139+134	258 Roble
Hill, Roy Irving	Medford, Ore.	C.E. 136–2	Beta Theta Pi
[12]Hillis, Donuil Marshall A. B., Stanford, 1921	Los Angeles	Chem. 86-103+0	334 Encina
[4]Hillis, Katholeen M.	Los Angeles	LD	302 Roble
Hinckley, Barton Armin	Hollywood	LD 47+22	225 Encina
Hinckley, Richard Hoagland	Hollywood	LD 46+14	Delta Kappa Ep.
[3]Hindes, Brooks Edward	Menlo Park	LD 9–6	Menlo Park-mp
[1]Hinsdale, Vernon Clifford	Hood	LD	405 Kipling-p
Hinton, William Frank	Hansen, Ida.	Geol. 80+10	20 Sequoia
[5]Hirata, Henry Hikoichi	Japan	Chem. 118+50	735 Ramona-p
[5]Hirschfeld, Ellis A. B., Stanford, 1921	Butte, Mont.	Law gr.	300 University-p
[234]Hirschman, Reginald M.	San Mateo	LD 15–9	106 Encina
[12]Hitchcock, Donald M.	Paso Robles	Geol. 36-52–2	109 Encina
[4]Hitchcock, Lewis G.		LD	17 Alvarado
[4]Hobro, William L.	San Francisco	LD	140 Encina
[234]Hodges, Lauder W.	New York, N.Y.	Law 178+97	116 Encina
Hodges, Michael Bryan	Yuma, Ariz.	Hist. 91+63	215 Encina

[23]Hodgson, Foresta	Yonkers, N.Y.	LD 22+5	274 Roble
Hoever, Henrietta Maud	Willows	Engl. 100–28	Chi Omega
[12]Hoffman, Mary Virginia	Pasadena	Econ. 63·72+87	Pi Beta Phi
[4]Hoffmann, Paul Edward	Oakland	LD	248 Encina
[1]Hogan, James Harrington	Vallejo	Econ. 69–46	405 Emerson
Hogg, Melita Mary A. B., Stanford, 1921	Saratoga	Psych. 16·181+86	332 Roble
Hogle, Milton Monroe, Jr.	Lincoln	Econ. 73+25	Theta Chi
[4]Hoisholt, Estella	Oakdale	Ed. G. A.	200 Roble
[5]Holaday, Perry Ward	San Jose	Geol. 67·99+12	215 Encina
[4]Holbrook, Bernard D.	AnnArbor,Mich.	LD	19 Lasuen
[1]Hole, Philip DeCew	Burlingame	Hist. 43–19	Burlingame-b
[12]Hollingshead, John H.	Boise, Ida.	Econ. 35·82+46	Theta Chi
Hollingsworth, James Edwin	Hemet	Econ.-Law 94·52+43	105 Encina
Hollingsworth, Lytle Webster	San Jose	M.E. 7·97+102	Theta Chi
[4]Holliway, Harrison E.	SanFrancisco	LD	232 Encina
Holmes, Alden Walton	Redlands	Econ. 129+55	Theta Delta Chi
[12]Holmes, William Henry A. B., Stanford, 1921	Eugene, Ore.	C.E. 80·102+67	251 Encina
[23]Holmes, William Willard	Hollister	Geol. ‡ 25+0	30 Encina
[5]Holston, Ashley Stanford	Mayfield	Geol. 136+60	199 Leland, M-m
[3]Holt, Nancy Harriette A. B., Stanford, 1920	Portland, Ore.	Fr. gr.	Pi Beta Phi
Holven, Alfred Leonard	Long Beach	Chem. 40·126+53	AlphaSigmaPhi
[4]Hood, Donaldson G.	Portland, Ore.	LD	
Hood, Margaret Henrietta	Long Beach	LD 45+83	169 Roble
[1]Hood, Walter H.	Long Beach	Econ. 38–28	
[3]Hooper, Alfred S.	San Francisco	LD 15+14	450 Encina
[1]Hoover, Fenton Whitman	Los Angeles	C.E. 89·48–22	737 Bryant-p
Hoover, Mildred Brooke	Palo Alto	Fr. 88+67	Kappa Kappa Gamma
Hopper,Velma Aileen	Rocky Ford,Colo.	Econ. 139+119	Chi Omega
Hopper, Veta	Rocky Ford, Colo.	Fr. 46·43+66	269 Roble
[1]Hoppin, Virginia	Woodland	LD 15+7	167 Roble
Horn, Arthur Walton	San Jose	Econ. 139+26	434 Encina
Hornaday, Francis Paul A. B., Nevada, 1920	San Francisco	Law gr.	345 Encina
Horner, John Mears	Honolulu, T.H.	Chem. 105·40+20	543 Byron-p
[4]Horrall, Albion Harris A. B., Washington, 1919	Colfax, Wn.	Educ. gr.	350 Encina
[4]Horstmeyer, Arend L.	San Francisco	LD	31 Encina
[234]Hosepian, Haig Mitchell	Pasadena	Phyl. 159+21	531 Encina
Hosepian, Vaughn Mitchell	Sanger	Phyl. 99+19	531 Encina

Hoskins, Dorothy Helen	Toronto, Can.	Engl. 53·93+70	Sigma Kappa
Hotaling, Lorice Katharine	Pasadena	Engl. 83+43	Delta Delta Delta
Housh, Cecil Noble	Denison, Kans.	Geol. 67·94–8	530 Encina
[4]Houston, Samuel James A. B., Occidental, 1920	Los Angeles	Educ. gr.	320 Encina
[3]Howard, Evelyn	Sacramento	LD 15+19	377 Roble
[4]Howard, George Carver	Snohomish, Wn.	Educ. gr.	5 Salvatierra
A. B., Bridgewater, Mass., State Normal School			
Howard, Lloyd Gibbs A. B., Stanford, 1921	San Francisco	Law 16·167+108	Kappa Alpha
[4]Howard, Lowry S.	Menlo Park	Educ. gr.	Menlo Park
Howard, Margaret	Oakland	Econ. 53·104+27	Kappa Alpha Th.
[4]Howe, Ralph Denny	Palo Alto	LD	955 Channing-p
[1]Howell, James Mint, Jr.	San Jose	Econ. 56+28	Delta Tau Delta
Howes, John Gaylord	Palo Alto	Hist. gr.	219 Ramona-p
Hoxsie, Earl Justin	Folsom	M.E. 151–14	114 Encina
[1]Hoxsie, Sophia Marguerite	Folsom	Math. 12·39+8	102 Roble
Hoyt, Frank Clark	Chicago, Ill.	Phys. gr.	C'ty Rd & Cookse y Lane
M. S., Massachusetts Institute Technology, 1920; Ph. D., Stanford, 1921			
Hsu, Leonard Shihlien A. B., Stanford, 1921	Changsha, China	Econ. gr.	Chinese Club
[3]Hubbard, Charles A. B., Stanford, 1919	San Francisco	M.E. gr.	Theta Chi
[4]Hubbard, Harley Corwin	Los Angeles	LD	251 Encina
Hubbs, Harry Coffin	Palo Alto	Econ. 136+149	135 Cowper-p
Hudson, Carroll Delmar	Los Angeles	M.E. 136+29	Alpha Tau Omega
[5]Huff, William Earlin	Mountain View	Geol. 123·41–6	Mt. View-mv
Hughes, Frederick Marshall	Palo Alto	Econ. 88+56	1234 Emerson-p
[4]Hughes, John R.	Salinas	LD	310 Encina
[5]Hughes, Robert Elwyn	San Francisco	Pre-Clin. 135·41+9	900 Waverley-p
[5]Hughes, Thomas Patrician, Jr. A. B., Stanford, 1921	Palo Alto	Chem. gr.	316 Encina
Hugo, Merrill S.	Mountain View	M.E. 92+27	Mountain View-mv
[23]Hull, Marie Ellen	San Mateo	LD 33+9	362 Roble
[1]Humphreys, Jasper McAdory	Sanger	LD	209 Encina
Huneke, Albert Hussey	Los Angeles	LD 30–5	Alpha Delta Phi
Hungerford, Beecher F.	Upland	Econ. 90·44–2	105 Encina
Hunie, Frederick Blydenburgh	Pasadena	M.E. 20·120+8	126 University-p
Hunt, Faye Josephine	Twin Falls, Ida.	Engl. 21·123+192	234 Roble
Hunt, Harriet A. B., Stanford, 1921	Pasadena	Econ. 180+131	Kappa Kappa Gam.
Hunt, Harry James	Twin Falls, Ida.	LD 48+96	20 Encina
[5]Hunter, Clarence Lester A. B., Stanford, 1918	Redlands	Med. gr.	2321 Sacramento, SF-sf

[4]Huntington, Evelyn Hope	Palo Alto	LD	516 Kingsley-p
Hurd, Joubert Bryan	Medford, Ore.	Econ. 41·43+11	Alpha Sigma Phi
Hurlbut, Dorothy	Los Angeles	Span. 104+3	Kappa Kappa Gam.
[124]Hurley, Charles Clifton	Albion	Hist. gr.	347 Encina
A. B., Stanford, 1920, A. M., 1921			
[5]Hurley, Jere Elwood	Albion	Law gr.	347 Encina
A. B., Stanford, 1920			
[4]Hurt, Everett P.	Chanute, Kans.	Min. 11+18	58 Encina
[5]Huse, William W., Jr.	Chicago, Ill.	Engl. 117·49+80	406 Encina
[2]Huston, Carol Glen	Oakland	Econ. ‡ 0–9	179 University
Hutchens, Francis Case	Los Angeles	Lat. 94+163	55 Encina
[5]Hutchings, Raymond R.	Marysville, Ind.	Educ. gr.	19 Salvatierra
A. B., Indiana, 1920			
Hutton, Donald Voorhes	Bozeman, Mont.	Econ. 51–26	Phi Kappa Psi
Hutton, Mildred Marie	Lemoore	Span. 180+148	Chi Omega
A. B., Stanford, 1921			
[4]Hyatt, Antonia	Sacramento	Chem. gr.	Pacific Grove-pg
A. B., Stanford, 1918			
[5]Hyatt, Persis	Sacramento	Ent. 3·167+42	Kappa Alpha Theta
[5]Hyatt, Phyllis	Sacramento	LD 36·42+4	161 Roble
Hyde, Carol Elizabeth	Runnymede	LD 44+73	R.R. 1, Runnymede-p
[5]Hyde, William Avery	Los Altos	Chem. 4·78+126	Los Altos-la
[1]Hyer, Anna Doris	Ft. Leavenworth, Kans.	Chem. gr.	319 Roble
A. B., Stanford, 1920			
Imokawa, John Kiichi	Fukuoka, Japan	M.E. 89+139	2 Alvarado
[5]Ingebritson, Reuben	Palo Alto	C.E. 58·53+64	309 Ramona Bldg., -p
Ingoldsby, Kirby	Pasadena	M.E. 142–41	202 Roble
[1]Ingraham, Mark Eastwood	Mt. View	Chem. 12–29	Mountain View-mv
Innes, Wells William	Santa Ana	Econ. 45·40+21	Delta Tau Delta
[1]Inocencio, Felipe	Placer, Masbate, P.I.	Chem. gr.	406 Ramona-p
A. B., Redlands, 1920			
[234]Irelan, Elma Clementine	Eagle Pass, Tex.	Educ. gr.	281 Addison-p
B. S., Washburn, 1903			
[4]Ireland, Anne Scott	Oakland	Engl. gr.	167 Roble
A. B., Mills College, 1921			
[4]Irving, Lawrence	Menlo Park	Phyl gr.	Pacific Grove-pg
A. B., Bowdoin, 1916, A. M., Hawaii, 1917			
[4]Irwin, Eugene Jerel	Berkeley	Educ. gr.	362 Encina
A. B., Stanford, 1920			
Irwin, Kathryn	Lindsay	Engl. 125+7	Chi Omega
[1]Irwin, Oscar Frederick	San Diego	Econ. 45·13+0	660 Waverley-p
Irwin, Thomas George	Twin Falls, Ida.	Econ. 96+50	444 Encina
Irwin, William Hyde	Brookdale	LD 42+5	15 Salvatierra
[1]Isenberg, Rudolph Alex.	Honolulu, T.H.	Econ. ‡ 9–6	14 Salvatierra

Iseri, Kamehachi Thomas A. B., Stanford, 1921	Los Angeles	Chem. 24·171+26	Japanese Club
Ishii, Frank Toru	Long Beach	Econ. 135–12	50 Encina
[3]Ito, Charles A. B., Stanford, 1920	Tokyo, Japan	Hist. gr.	Japanese Club
[1]Iverson, Siegfried James	Tulsa, Okla.	LD 5–14	410 Lytton
[1]Ivey, Paul Gerald	San Antonio, Tex.	LD 4–15	29 Salvatierra
Jackson, John K.	Stockton	Geol. 31–6	Phi Kappa Psi
[1]Jackson, Margaret A.	Lexington, Ore.	Econ. 42+26	Gamma Phi Beta
Jackson, Newton Rumell A. B., Brigham Young, 1917	Provo, Utah	Med. gr.	2312 Webster, SF-sf
[4]Jackson, Owen Leslie A. B., Simmons College (Texas), 1916	Mountainair, N.M.	Educ.	362 Encina
Jacobsen, Lydik Siegumfeldt A. B., Stanford, 1921	Napa	M.E. 184+271	528 Encina
Jacobsen, Theodor Siegumfeldt	Napa	Chem. 122+157	22 Lasuen
[1]Jacobson, Herbert Leroy	Colusa	LD 15+2	26 Sequoia
Jacoby, Lionel Arnold A. B., Stanford, 1921	Oroville	Med. gr.	123 Encina
James, Arthur George A. B., Stanford, 1921	Palo Alto	M.E. 27·162+48	215 Churchill-p
[4]James, David John	Riverside	LD	Encina
James, Martha Abigail	Palo Alto	Pre-Med. gr.	735 Homer-p
James, Norris Ehrhorn	Palo Alto	LD 47+9	215 Churchill-p
[23]James, Wright Elwood	Compton	Geol. ‡ 27+15	Phi Gamma Delta
Jameson, Adelaide A. B., Stanford, 1920, A. M., 1921	Corona	Chem. gr.	Delta Gamma
Jameson, Ruth Avis	Corona	LD 42+6	217 Roble
[12]Jameson, Wesley, Jr.	St. Paul, Minn.	Econ. 15·59–12	430 Encina
[23]Jamieson, Hamer H. Ph. B., Chicago, 1920	Chicago, Ill.	Law gr.	Delta Tau Delta
[4]Jamison, Emma V.	Santa Clara	Econ. 67·26+40	Santa Clara-sc
Jamison, Mary Muir	Santa Monica	Span. 115+38	Gamma Phi Beta
[23]Janssen, Clayton Robson	San Francisco	LD 32–5	Alpha Delta Phi
[12]Jarvis, Russell Boyden A. B., Stanford, 1921	Greeley, Colo.	Law gr.	Phi Delta Theta
[3]Jason, William Eli, Jr.	San Francisco	Econ. ‡ 12–6	206 Encina
[12]Jedlicka, Charles Ralph	Palo Alto	LD 12–25	200 Encina
[1]Jefferson, Edward Milton A. B., Stanford, 1920, A. M., 1921	Inglewood	Educ. gr.	228 Encina
[12]Jenanyan, Edward Harutune A. B., Stanford, 1921	Fresno	Hist. 100·80+31	564 Encina
Jenkins, Kendall Reed	Glendale	C.E. 81+71	305 Lytton-p
[4]Jenkins, Reichard Leos	Los Angeles	LD	200 Encina

[5]Jenks, Christopher M. StanfordUniv. Econ. 145+14 Phi Gamma Delta
Jennings, Howard Wight Moberly, Mo. Econ. 135·49+84 Sig. Alpha Ep.
A. B., Stanford, 1921
[4]Jennings, Ida Stanford Univ. LD Roble
Jennings, Thomas Murdock MenloPark Econ. 21·84+1 Kappa Alpha
Jensen, Jens P. Spokane, Wn. Med. gr. 2136 Pacific, SF-sf
B. S., Idaho, 1917
[1]Jepsen, Hans Jensen Gardnerville,Nev. Law 23·158+5 Delta Tau Delta
A. B., Stanford, 1921
[4]Jergins, Allen Andrew Los Angeles LD 107 Encina
[5]Jertberg, Gilbert Henry Stanford Univ. Law gr. Theta Chi
A. B., Stanford, 1920
[4]Jewell, Marion Richard Palo Alto LD 327 Waverley-p
[12]Johannsen, Kenneth Hutton Lemoore Chem. 37·142+3 DeltaK.Epsilon
A. B., Stanford, 1921
John, Harold Thomas Florence, Colo. M.E. 87+12 426 Encina
[4]Johnson, Carl Edward Turlock Pre-Med. 58 Encina
[1]Johnson, Dewey W. SaltLakeCity,Utah Econ. 0–13 331 Dartmouth, M
[13]Johnson, Dorothy Edith Burlingame Econ. 90+30 333 Occidental, B-b
Johnson, Floyd Lemuel Adin LD 27–20 O.G.VillaHotel,MP-mp
[2]Johnson,George W. DiamondSpgs.,Colo. Hist. 10·28–24 Box 646-p
Johnson, Glenn Walter Ceres Econ. ‡ 14·88–5 21 Encina
[1]Johnson, Howard A. Los Angeles Chem. 82·27–31 DeltaK.Epsilon
[5]Johnson, Oliver Wolcott Palo Alto Chem. 34·132+124 331 Lincoln-p
Johnson, Paul Condit Denver, Colo. M.E. ‡ 49–1 220 Encina
Johnson, Richard Edwin Satsop,Wn. M.E. 91+130 426 Encina
[12]Johnson, Sidney Preston Red Bluff M.E. 6·184+189 Sigma Chi
A. B., Stanford, 1921
Johnson, Wanda Lee Ontario Hist. 95+109 351 Roble
Johnson, Willard Lendelof SanFrancisco Econ. 108+11 337 Encina
Johnston, Dorothy San Jose Econ. 12·170+211 Alpha Phi
A. B., Stanford, 1921
[13]Johnston, Evelyn Hatch San Jose Econ. 88+1 KappaKappaGamma
Johnston, Frank Reed San Jose Med. gr. 2631 Clay, SF-sf
A. B., Stanford, 1917
Johnston, Madeline Tacoma, Wn. Med. gr. 1027 Bryant-p
A. B., Reed College, 1919
[4]Johnston, Petra Beatrice Redwood City Educ. gr. Redwood City-rc
A. B., Stanford, 1914
[1]Johnston, Russell Rueben San Jose Hist. 23·108+20 Phi Kappa Psi
[4]Johnston, T. Jean Watsonville Med. gr. 2400 Durant, Bkly-b
[5]Jones, Bernard C.J. Corr Los Angeles Psych. 107·66+63 136 Encina
Jones, Evelyn Mabel Santa Clara Econ. 81+33 261 Roble

Jones, Gertrude Flint A. B., Stanford, 1919	Palo Alto	Med. gr.	1233 Taylor, SF-sf
[12]Jones, Guy Peter	Durham	Chem. 67-83+42	660 Waverley-p
Jones, Louis Ernest	Roseville	LD 47+14	1047 Ramona-p
[4]Jones, Marion	Los Angeles	Ed. ‡	360 Roble
[4]Jones, Mary Pauline	Williams, Ariz	Hist. ‡	Roble
Jones, Ruth Albertine A. B., Stanford, 1921	Pasadena	Econ. 14-166+138	Pi Beta Phi
[5]Jongeneel, Albert Martin	Berkeley	LD 41+25	Alpha Kappa Lambda
[1]Jopson, Frank Granvil	San Jose	Geol. 56–2	Alpha Sigma Phi
[5]Jordan, Eric Knight	Stanford Univ.	LD 42+34	Xazmin House
[4]Jordan, John S. A. B., Denver, 1916	Grass Valley	Educ. gr.	25 Salvatierra
Joseph, Gertrude Jennie	Mt. View	Hist. 134+52	MountainView-mv
Joseph, Paul Mitchell	Los Angeles	LD 49+47	119 Encina
[1]Joyce,SamuelF.,Jr.	WebsterGroves,Mo.	Geol. 25–28	138 Encina
Judah, Nelson Van	Los Angeles	Econ. 6-49–7	Delta Upsilon
Judge, Anna Frances	Hollister	Econ. 119+61	Kappa K. Gamma
[1]Judy, Gilbert Walter	Roseville	LD 3–14	526 Ramona
Jurs, Virginia	San Francisco	LD 31+41	105 Roble
Kahle, Francis Clifford	San Diego	Econ.-Law 7-86+3	13 Encina
Kahle, Richard Frederick A. B., Stanford, 1918, J. D., 1921	San Diego	Law gr.	448 Encina
Kai, Gunki A. B., Stanford, 1921	San Francisco	Econ. gr.	728 Ramona-p
Kallam, Floyd Loren A. B., Stanford, 1921	San Diego	M.E. 183+114	Theta Xi
Kannan,K.Kunhi Puthyara, S.Mal.,India A. M., University of Madras, 1908, Ph. D., Stanford, 1921		Ent. gr.	435 Cowper
Kauffman, Francis Michael	Chicago, Ill.	LD 45+8	30 Sequoia
Kaufman, Gretchen A. B., Stanford, 1921	Bellingham, Wn.	Chem. 93-87+116	148 Roble
Keck, Howard Burrell	Washington,Iowa	Engl. 89+36	Theta Chi
[2]Keen, Sadie Ernestine	Palo Alto	Ent. 72-109+162	1116 Bryant-p
[1]Keith, Lillian A.	Vaucouver, B. C.	Educ. ‡	Roble
[134]Kellam, Elizabeth A. B., Vassar, 1919	San Francisco	Educ. gr.	1130 Bryant-p
Keller, Walter Paul	Portland, Ore.	Econ. 80+35	Sigma Alpha Ep.
Kelley, Kenneth K.	Salt Lake City, Utah	Chem. 100+170	253 University
Kellogg, Dorothy W.	Santa Rosa	Engl. 84+72	Kappa Alpha Theta
Kelly, Handel W.	San Jose	LD 34–13	732 Emory, SJ-sj
[4]Kelly, Harold Richard A. B., Bucknell, 1915	Stanford Univ.	Law gr.	7 Kingscote
Kelly, James Bryden	Palo Alto	Ent. 71–1	940 Bryant-p

[4]Kelly, James Thomas	Santa Ana	LD	337 Encina
Kelly, Jessie Creager	Palo Alto	Educ. 85·97+54	241 Cowper-p
[3]Kemnitzer, Luis E.	Mill Valley	LD 4·14+13	41 Encina
[23]Kemnitzer, Wm. Johnson	Mill Valley	LD 4·32+20	Delta Upsilon
[34]Kennedy, Harry Fowler	Palo Alto	LD 15+5	421 Cowper-p
Kennedy, Laura E.	Palo Alto	Econ. 4·89+112	334 Lincoln-p
Kennedy, Lewis Harold	Long Beach	C.E. 85·53+42	344 Encina
Kennedy, Robert Bankert	San Jose	LD 47+32	841 Willis, SJ-sj
[23]Kennedy, Thomas Hart	Normal, Ill.	LD 41·31+9	11 Salvatierra
[5]Kennedy, Vernon Fowler	Palo Alto	Phyl. 117+34	427 Cowper-p
Kenney, Edgar Hugh	Ontaro	LD 26–26	105 Encina
[1]Kenny, Robert Walker	Los Angeles	Pol.S. gr.	Phi Gamma Delta
[1]Kent, Florence Bartram	Halcyon	LD 15+3	240 Kellogg-p
[23]Kerr, Anita	Redlands	Engl. ‡ 25–6	Delta Gamma
[5]Kerr, Paul Francis	San Jacinto	Min. gr.	322 Encina
B. S., Occidental, 1919			
[4]Ketchum, Pierce W.	Salt Lake C'y, Utah	Chem. ‡	Mayfield-m
Kettenberg, Robert John	Pt. Loma	M.E. 40·46–8	124 Encina
[4]Kibby, Ira W.	Palo Alto	Educ. gr.	707 Addison-p
B. A., Colorado State Teachers' College, 1918			
Kiggens, Clarence E.	Lindsay	Econ. 89+46	Phi Gamma Delta
[5]Kildale, Malcolm Brus	Eureka	Geol. 47·145+201	207 Encina
Kiler, Elza Leslie	Santa Barbara	Bot. ‡ 38+2	65 Sequoia
Kilpatrick, Joseph J.	San Jose	M.E. ‡ 32–12	655 S. 6th, SJ-sj
Kilpatrick, Wylie	Stanford Univ.	Econ.-Law 18·98+95	540 Encina
Kiltin, Russell	Duluth, Minn.	Econ. 31+35	52 Encina
[4]King, Anna V.	Palo Alto	Chem. gr.	426 Channing-p
A. B., California, 1907.			
King, Charles Samuel	Portland, Ore.	Econ. 95+77	248 Encina
King, Donald Eliot	Porterville	Zool. 98+103	Mayfield-m
[4]King, Douglas Low	Palo Alto	LD	Ravenswood-p
[4]King, Edward Dimmick	Palo Alto	LD	Cowper Court-p
[3]King, Ernest Charles	Mountain View	LD 15–2	Mountain View-mv
[5]King, John Preston	Jasper, Ala.	Econ. 13·59–15	445 Bryant-p
King, Maxwell Clark	Los Angeles	Econ. 11·172+13	Alpha Delta Phi
A. B., Stanford, 1921			
King, Raymond Irvin	Porterville	Bact. 89+40	821 Stanford, M-m
[4]King, Robert Maxwell	Merced	LD	330 Encina
Kingrey, Waive Lotha	Santa Ana	Econ. 90+40	Gamma Phi Beta
[4]Kinnear, Arthur	San Jose	LD	421 N. 4th, SJ-sj
[5]Kinney, Paul Burt	Hollywood	Pre-Clin. 8·170+41	Delta Upsilon
Kinney, Roland Thomas	Los Angeles	Law 107+46	Zeta Psi

[5]Kinney, Wendell Harcourt	Los Angeles	Law 7·166+56	Zeta Psi
Kinnison, Court John	Boise, Idaho	LD 34+19	52Sequoia (Bx451-p)
Kirby, Dorrell William	Darwin	Geol. 43·48+35	28 Sequoia
[5]Kirby, James Millard	Corona	LD 47+57	346 Encina
[4]Kircher, William J.	Burlingame	Educ. gr.	636 Gilman-p
A. B., Stanford, 1920			
[5]Kirk, Howard Manning	Bozeman,Mont.	LD 44+8	235 Emerson-p
Kirksey, Morris Marshall	Eagle Rock	Phil. 101·79+40	Encina Gym.
Kirkwood, Arthur C.	Colo.Spgs., Colo.	M.E. 91+7	Phi Kappa Psi
Kistler, Samuel Stephens	Santa Rosa	Chem.135·52+34	AlphaK.Lambda
A. B., Stanford, 1921			
Kitow, Edwin Kikutaro	Palo Alto	LD 29–17	Japanese Club
[1]Kjaerbye, Harold Franklin	Fresno	LD	501 Encina
Klahn, Myrtle Olive	Orange	Span. 90·50+75	223 Roble
Kleckner, Thomas M.	Mt. View	Econ. 63·121+43	Mt. View-mv
A. B., Stanford, 1921			
Kleinpell, William D.	Los Angeles	Geol. gr.	500 Encina
A. B., Stanford, 1921			
Kleiser, George W., Jr.	San Francisco	Econ. 47–11	Sigma Nu
[4]Klemme, Edward J.	Bellingham, Wn.	Educ. gr.	
A. M., Northwestern Univ.			
Kline, Mortimer Allen	Los Angeles	Law 3·181+60	Alpha Delta Phi
A. B., Stanford, 1921			
Klingberg, Frances Irene	Whittier	Med. gr.	Kingscote
A. B., California, 1920			
Klipsch, William M. V.	Hope, Ind.	Educ. 116·44+12	223 Cowper
Knappen, James Fawcett	Campbell	Econ. 95+130	73 Sequoia
[4]Knipe, Charles F.	San Francisco	LD	826 Waverley-p
[23]Knipmeyer, Gilbert	Alma, Mo.	Engl. gr.	249 Kipling
A. B., Stanford, 1919, A. M., 1921			
[5]Knox, George Livingston	Palo Alto	Geol. 21·188+31	325 Everett-p
Koba, Fred Michio	San Francisco	LD 45+3	Japanese Club
[23]Koch, George Otto	San Francisco	LD 32+20	451 Channing-p
Koehler, Max Conrad	San Jose	C.E. 75–6	362 Encina
Koepfli, Joseph Blake	Los Angeles	Chem. 50+13	Alpha Tau O.
[4]Koffman, Oscar	Detroit, Mich.	Pre-L. ‡	124 Encina
Konishi, William Hiroshi	Lemoore	M.E. 93–9	Japanese Club
[5]Korte,KendallCharles	MedicalLake,Wn.	Geol. ‡ 34–7	1831 Waverley-p
[12]Korts, Berhard H.	Oxnard	Chem. 98+3	58 Encina
Kraemer, Eric Eugene	San Diego	LD 42+12	Phi Kappa Sigma
Kraft, Warren H.	San Francisco	Chem. 117+56	Phi Delta Theta
[5]Krantz, Nettie E.	Wenona, Ill.	Engl. gr.	Kingscote
B. S., Knox College, 1916			
[4]Kranz, Milton A.	San Francisco	Educ. ‡	231 Encina

Kranzthor, Wilfred A. Los Angeles Econ. 80+67 81 Sequoia
[3]Krisher, Dorothy Lucile Palo Alto Econ. 18·150+202 925 Hamilton-p
Krock, Frederick Henry Los Angeles Pre-Med. 134·47+30 Sigma Nu
[4]Kroyer, John O. Oshkosh, Wis. Econ. ‡ 10 Lasuen
[23]Kuckein, Ernst P. Burlingame Chem.sp.9–4 1234ElCam.Real,B-b
Kuhnel, Gustaf Lawrence SanFrancisco LD 42–8 433 Encina
[5]Kulmann, Charles Albert Palo Alto M.E. 76+78 136 Encina
[4]Kussart, Jeannette Greeley, Colo. Span. gr. 362 Roble
A. B., Colorado State Teachers' College, 1918
[4]Kylberg, Brother Lars Merced Falls LD 52 Encina
[4]Kynaston, Barbara Mary San Jose LD 262 Kingsley-p
Kyle, George Marion San Francisco Phil. 141·57+22 Beta Theta Pi
A. B., Stanford
[4]Lacey, Doris Salinas LD 253 Roble
Lacey, Lorin Daryl Monterey M.E. 103+15 Delta Upsilon
[4]Lacombe, Elizabeth Mayfield Hist. 611 Palo Alto, M-m
[5]Lacombe, Leo George Mayfield Rom. Lang. gr. 611 P.A., M-m
A. B., St. Patrick Seminary, 1910, A. M., Stanford, 1921
Lake, Merrill Evans Burbank LD 49–2 Kappa Alpha
[4]Lamar, Emil Los Angeles LD 18 Encina
[124]Lampson, Myrle Robbins Palo Alto Engl. 74+86 235 Embarcadero-p
[4]Lamson, David Albert Palo Alto LD 319 Pope-p
Lamson, Margaret Eunice Palo Alto Med. gr. 2723 Pine, SF-sf
A. B., Oregon, 1919
Landels, Edward Durley Los Altos Econ.-Law 15·99+100 11 Sequoia
Landis, Philip Flint Oakland Pol.S. 92+81 54 Sequoia
[4]Landreth, Austin Pendleton, Ore. Educ. gr. 205 Encina
A. B., Indiana, 1919
Landweer, Andre Essio Palo Alto LD 50+19 626 Homer-p
[1]Lane, Albert C., Jr. Springfield, Mass. Econ. sp. 31+14 Alvarado Hall
Lane, John Calhoun Oakland M.E. 85+74 243 Encina
[23]Lane, John Sterling Palo Alto LD 18·32+18 601 Melville-p
Lang, Mary Edith Fullerton Bot. 90·44+22 221 Roble
Lang, Robert Edward Lee Dallas, Tex. Econ. 89+34 69 Sequoia
[1]Langcauon, Prudencio Oas,Albay, P.I. Educ. 90·90+141 365 Channing
A. B., Stanford, 1921
[3]Langdon, John Menlo Park Hist. ‡ 8+1 Box 495, MP-mp
Langer, Ruth Anna San Francisco Psych. 145+158 180 Roble
Langford,LesterWatts NorthPlatte,Neb. LD 47+32 Phi Delta Theta
[5]Langford, Russell R. NorthPlatte,Neb. Pol.S. 90+39 Phi Delta Theta
[5]Langford, Verne Oakland Chem. 18·151+40 525 Encina
[4]Langley, Edna Jane Kansas City, Mo. LD 330 Roble

Lantzeff, George V.	Petrograd, Russia	Educ. gr.	1431 Waverley-p
A. B., University of Petrograd			
Lapp, Burton Leonard	Oakland	LD 40+15	428 Encina
[4]Laraway, Thurston W.	HoodRiver, Ore.	Pre-Med. gr.	329 Encina
A. B., Oregon, 1920			
[5]Lardi, Albertram	San Francisco	Lat. 62+8	344 Roble
Larimer, Aline Rose	Hollywood	Econ. 168+115	Alpha Omicron Pi
Larkey, Ruth Elizabeth	Santa Clara	Educ. 67·46+34	1216 Wash., SC-sc
[5]Larsen, Joseph Urban	Warren, Ariz.	Geol. 5·132+10	310 Encina
Larson, Irving Brooks	Palo Alto	Chem. 136+65	1028 Emerson-p
[4]Larue, James Van B.	Grass Valley	LD	20 Encina
Laub, Egbert Warren	Santa Cruz	LD 41+3	301 Encina
Laughlin, Herbert Sidney	Los Angeles	LD 34–12	24 Sequoia
[5]Laughlin, Reginald S.	San Jose	Law 113·62+22	Phi Kappa Psi
[23]Lavelle, Michael James	Los Angeles	Pre-L. sp. 20·54+4	904 Cowper
Law, Raymond Frakes	Elko, Nev.	Psych. 52·40+18	38 Sequoia
[4]Lawrence, Grove	San Mateo	LD	855 Jefferson Ct., SM-sm
Lawrence, Helen Jean	San Mateo	LD 41+39	325 Roble
Lawrence, Sarah Elizabeth	Millbrae	Fr. 74–16	Kappa Alpha Theta
[234]Laws, Gertrude	San Diego	Educ. 135·31+48	22 Alvarado
[5]Layman, Everett Seymour	Reno, Nev.	Law gr.	448 Encina
A. B., Stanford, 1920			
Leach, Wanda Connell	Los Angeles	Ed.G.A. 82+4	Chi Omega
Learned, Mary	Gilroy	Fr. 91+101	349 Roble
Lechten, A. Madeleine	San Francisco	Lat. 25·63+10	305 Roble
Lee, Beatrice	Las Animas	LD 34–1	Alpha Omicron Pi
Lee, Chiu Hang	Canton, China	Educ. 42–1	Box 702, MP-mp
Lee, Ruth Dorinda T.	Stanford Univ.	Chem. 121+93	11 Alvarado
[1]Lee, Thomas Henry	Del Monte	LD 0–16	806 Bryant-p
Lee, William George, Jr.	Auburn	LD 46+28	31 Sequoia
[5]Lee, Win Fred	Bellingham, Wn.	Econ. 114·54+82	52 S'q'a (Bx451-p)
Leeds, Albert Wagner	Los Angeles	Law gr.	Kappa Alpha
A. B., Stanford, 1920			
Leeds, Fred Barclay	Los Angeles	LD 45+39	Kappa Alpha
[4]Legerton, Victor Arthur	Dallas, Tex.	LD	4 Cowper Court-p
Leh, Marcus DeWitt	Trident, Mont.	LD 43+30	434 Encina
Leicester, Elsie Allen	San Francisco	Hist. 172+159	Kap. Kap. Gamma
[5]Leiser, William Frederick	Twin Falls, Ida.	Law gr.	326 Encina
A. B., Stanford, 1921			
[4]Leistner, Hugo	Palo Alto	LD	400 Pope-p
LeMarinel, Kenneth F.	Spokane, Wn.	Geol. 77+11	Alpha Delta Phi
Lembke, Hugo John	Orange	Geol. 144+90	325 Encina
[4]Lenz, Harry Brewer	Long Beach	Educ. ‡	208 Encina

Leonard, Eileen Mary — San Francisco — Med. gr. — 1124 Fulton, SF-sf
A. B., California, 1917

[4]Leonard, James M., Jr. — Virginia City, Nev. — LD — 125 Encina

[23]Levison, Walter Herman — San Francisco — LD 24+5 — 447 Encina

[23]Levit, Bertram Wm. — San Francisco — LD 30+50 — 351 Encina

[1]Levy, David Nathan — Prescott, Ariz. — Chem. 75·115+59 — 121 Encina
A. B., Stanford, 1921

[234]Levy, Scherl Maurice — Joplin, Mo. — LD 31+58 — 25 Salvatierra

Lewelling, Raymond — St. Helena — E.E. gr. — 557 Encina
A. B., Stanford, 1920, Engineer, 1921

Lewin, Bernhard — San Luis Obispo — Pre-Med. 97·35+17 — 123 Encina

[4]Lewis, Benjamin — Dinuba — Econ. gr. — 345 Encina

[4]Lewis, Frank Bertram — Watsonville — LD — 351 Encina

[12]Lewis, Joe Leslie — San Jose — Ent. 77+38 — 470 N. 3rd, SJ-sj

[134]Lewis, John Kent — San Diego — Med. gr. — 2321 Sacramento, SF-sf
A. B., Stanford, 1918

[2]Lewis, Joyce S. — Lone Prairie, Minn. — Law — 310 Ramona Bldg.-p

Lewis, Orme — Phoenix, Ariz. — LD 30–22 — 232 Encina

[3]Lewis, Richard Campbell — Mt. View — LD 15–10 — Mountain View-mv

[124]Lewis, Robert E. — Pacoima — LD 15–1 — 329 Encina

[3]Lewis, Robert Strong — Mayfield — Min. gr. — 362 Hanover-m
A. B., Stanford, 1905, Engineer, 1912

[5]Lewis, Warren Frederic — Stanford Univ. — Engl. 58·111+70 — 59 Sequoia

[234]Lichtenberg, Edward F. — San Francisco — LD 26–18 — Zeta Psi

Liebendorfer, Donald E. — Modesto — LD 45+23 — 308 Encina

Lies, Margaret Anna K. — Waterville, Wn. — Econ. 96+49 — Gamma Phi Beta

Likely, Homer Edmund — Stanford Univ. — Chem. 24·93+33 — 347 Encina

Liljenstein, Gustaf M. — New London, Conn. — Chem. 87+46 — 530 Emerson-p

Lilly, John Kenneth — Ashland, Ore. — Law gr. — Theta Delta Chi
A. B., Stanford, 1920

[5]deLima, Jorge Alves — Saõ Paulo, Brazil. — M.E. 65·92+76 — 227 Encina

[4]Lima, Ida M. M. — Nahant, Mass. — Educ. — Roble

[4]Linderman, Florence A. — Sacaton, Ariz. — Lat. gr. — 239 Roble
B. A. University of Redlands, 1915

[13]Lindsay, Mary Drennan — Butte, Pa. — Educ. gr. — 625 Ramona-p
A. B., Vassar, 1909, A. M., Pennsylvania, 1910

[4]Linn, George Irving — Merced — Educ. gr. — 425 Embarcadero-p
A. B., Stanford, 1910

Linneman, Lawrence J. — Watsonville — LD 47+6 — 418 Encina

[1]Linneman, Vincent J. — Watsonville — Econ. 104+92 — 418 Encina

[1]Linstrum, John Wesley — Kingsburg — Phyl. 33–13 — Delta Upsilon

[1]Lissner, Louis Meyer — Los Angeles — Law gr. — 323 Encina
A. B., Stanford, 1919, J. D., 1921

Litchfield, Everett S. — Independence, Kan. — Econ. 26·126+33 — CowperCt.-p

[1]Little, Galbraith Amasy	Los Angeles	Chem. 17–24	201 Encina
Livingston, Arthur Dean	Modesto	Chem. 151+82	523 Encina
[26]Lobree, Floyd	San Francisco	LD 13–19	541 Encina
Lockton, Eugene Andrew	Guerneville	LD 47+40	365 Channing
[12]Lockwood, Helen Fidelia	Pasadena	Econ. 14·81+15	Kap. Kap. Gam.
Loder, Arthur William	Palo Alto	Econ. sp. 59+2	426 Florence-p
[13]Loder, Edward Stark	Palo Alto	C.E. 68+38	426 Florence-p
Loe, Harris Davis	Wilsall, Mont.	LD 38+9	45 Encina
Loewenson, Leland H.	Portland, Ore.	LD 47+22	106 Encina
Loewenstein, Alfred B.	San Francisco	LD 41+12	400 Encina
Lohr, John Wesley	Modesto	LD 30–26	139 Encina
Lomax, John Donald	San Francisco	LD 46+18	W.War.Sch.,MP-mp
Lomax, Marian	Palo Alto	Math. 85·47+49	1545 Waverley-p
Lombard, Herbert Wm.	Eugene, Ore.	Law gr.	660 Waverley-p
A. B., Oregon, 1915, J. D., Stanford, 1921			
[4]Lombard, Nellie Mae	Eugene, Ore.	Engl. gr.	Roble
A. B., Oregon, 1916			
[12]Lonabaugh, Alger W.	Sheridan, Wyo.	Law 78·94–31	1445 Tasso-p
[12]Long, Charles Stuart, Jr.	Hayward	Law 69·102+54	Stanford Union
Long, Eldon Addington	San Jose	LD 51+64	251 Encina
[4]Long, Esmond R.	Chicago, Ill.	Med. gr.	
Long, Hubert E.	Palo Alto	Zool.45·40–9	365 Forest-p
[12]Long, Raymond W.	Ashland, Ore.	M.E. 38–6	Sigma Nu
Long, Sarah Baucus	Los Angeles	LD 44+72	326 Roble
[4]Longfellow, Henry W.	Fresno	LD	210 Encina
Loomis, Frederick Claxton	Los Angeles	M.E. 89+48	Alpha Delta Phi
[4]Loomis, Ruth Riddell	San Jose	LD	Roble
[12]Lopin, Anna Mildred	Sunnyvale	Chem. 115+2	360 Roble
Lormer, Florence Belle	Pasadena	Econ. 48·134+41	116 Roble
A. B., Stanford, 1921			
[4]Lorraine, Laura May	Palo Alto	LD	460 Homer-p
Lothrop, Marcus	San Bernardino	LD 45+20	25 Sequoia
Love, Charles Ashton, Jr.	Atascadero	Med. gr.	2152 Pine, SF-sf
A. B., Doane, 1914			
[34]Lovejoy, Gerard H.	East Ely, Nevada	LD sp. 9–7	11 Salvatierra
Loveless, Joseph E.	Johnson City, N.Y.	LD 49+59	4 Sequoia
[1]Lovell, Howell	Piedmont	Econ. 17–35	Chi Psi
[5]Lowers, Virginia Belle	Los Angeles	Hist. 140+221	311 Roble
[12]Lownsberry, Eleth Agnes	Palo Alto	Educ. 43·106+24	1048 Ramona-p
[12]Lowstetter, Mary E.	Wilkinsburg, Pa.	Econ. 15·120+29	Sigma Kappa
Lucas, William Dennis	Yakima, Wn.	LD 32–2	Chi Psi
Ludeke, Frederic Sebastian	Shandon	LD 52+50	230 Encina

[23]Lund, Andrew	San Francisco	LD 27+13	27 Alvarado
Lund, Henry Joseph, Jr.	San Jose	Med. gr.	2103 Calif.,SF-sf
A. B., Stanford, 1919			
[1]Lund, Ralph Frederick	San Francisco	Chem 14·171+39	114 Encina
A. B., Stanford, 1921			
[4]Lundahl, Victorine E.	San Francisco	Bact. ‡	332 Roble
[4]Lundburg, Harold C.	GrantsPass,Ore.	LD	59 Encina
Lundquist, Dell Theodore	Middletown	Chem. 4·142+205	409 Encina
[5]Lundquist, Leonard C.	San Francisco	Geol. 184+55	25 Alvarado
[23]Lunsford, Helen E.	Palo Alto	LD 26–15	317 Emerson-p
[4]Lunt, George Elliott	England	LD	331 Encina
[4]Lusignan, Harry Richard	Stockton	LD	8 Alvarado
[1]Lynn, Harold Fredric	Palo Alto	Geol. 55+10	181 Tasso-p
[4]Lynn, Jermyn Chi-hung	Peking, China	Engl.‡	4 Salvatierra
Lyon, John Herschel	Palo Alto	LD 45+45	304 Encina
[1]Lyon, Lewis Estes	Los Angeles	Chem. 56–38	Delta Chi
Lyon, Lois Valentine	San Francisco	Med. gr.	19 Kingscote
A. B., California, 1917			
[12]Lyons, Benton Jerome	Redwood City	LD 23–19	Sigma Nu
Lysaght, George William	San Francisco	LD 45+48	107 Encina
[5]Lytle, Aten Lee, Jr.	Los Angeles	LD 29–15	Delta Kappa Epsilon
[1]Mabry, Arnem E.	Jacksonville, Fla.	C.E. ‡	553 Forest-p
MacAlpine, Archie Burgess	Pasadena	Econ. 17·68+15	Zeta Psi
[12]McAnear, Francis Towne	Sacramento	Econ. 181+81	Stanford Union
A. B., Stanford, 1921			
[4]MacArthur, Beryl	Coeur d'Alene, Ida.	Educ.	344 Middlefield-p
MacArthur, Elizabeth	San Francisco	Sch. Ed. gr.	Kap. Kap. Gamma
A. B., Stanford, 1920			
McBride, Rexford Wm.	San Francisco	Bact. 135+39	325 Encina
McCaffery, B. Emmet	Portland, Ore.	LD 44+41	203 Encina
McCague, James Sidney	Sunnyside, Wn.	Econ. 74+14	10 Sequoia
[4]McCahan, Kathryn C.	Los Angeles	LD	351 Roble
[4]McCall,ArchieLivingston	Phoenix,Ariz.	LD	Encina
McCall, Margaret Frances	SanFrancisco	Engl. 36·128–25	260 Roble
[1]McCallum, Ruth Barbara	San Francisco	Econ. 82+5	Alpha Omicron Pi
McCanles,LuluLoRene	Lawrence,Kans.	Hist. gr.	428 Middlefield
A. B., Kansas, 1916, A. M., 1917, A. M., Stanford, 1921			
McCann, Sara Boyd	Los Angeles	Engl. 56+8	Pi Beta Phi
McCanse, Mabel Letitia	Santa Rosa	LD 50+30	249 Roble
[4]McCart, Marion	McMinnville, Ore.	Educ. gr.	Encina Gym.
B. S., Oregon Agricultural College, 1921			
[12]McCarty, Harold Leland	Fellows	M.E. gr.	41 Encina
A. B., Stanford, 1921			

McCarty, Honora C.	Stanberry, Mo.	Zool. 10·150+213	172 Roble
[4]McCay, Clive Maine A. B., Illinois, 1920	Logansport, Ind.	Chem. gr.	333 Encina
McClellan, Elizabeth de L.	San Mateo	Fr. 98+15	Chi Omega
[5]McClellan, H. Wallace	KlamathFalls, Ore.	Geol. 141+175	309 Encina
[23]McClinton, Ralph Edwin	Burlingame	LD 26+9	1201 Cabrillo, B-b
McClung, Lois E.	Colo. Spgs., Colo.	Econ. 90·40+21	AlphaOmicronPi
McClure, Thomas C.	Los Angeles	Econ. 40–15	501 Encina
McCombie, Harold Edward	SanAndreas	Pol.S. 154+54	HotelPaloAlto-p
[15]McCombs, William Clyde	Rivera	M.E. 45·56–14	315 Encina
Macconel, Dermont N.	Honolulu, T.H.	M.E. 64–20	Sigma Chi
[12]McConnel, Frederic J.	London, Eng.	C.E. 103·30+36	634 Hamilton
[5]McCormack, Dwight F.	Rio Vista	Econ. 18·146+53	Delta Chi
[4]McCormick, Earl Orvis B. S., Iowa, 1907	Palo Alto	Educ. gr.	Runnymede-p
[13]McCormick, Eleanor Jean A. B., Stanford, 1921	Palo Alto	Hist. gr.	1057 Ramona-p
McCormick, Eugene	Fowler	Econ. 145+6	117 Encina
[3]McCray, Edward Ivor	Burlingame	LD sp.13–10	1437Floribunda, B-b
McCrea, Alexander Wallace	LosAngeles	Econ. 85+9	512 Encina
[5]McCrea, Francis R.	Long Beach	Pre-Med.70·49+54	266Channing-p
McCready, John Donald	Redlands	LD 41–6	Alexandria Hotel-p
[4]McCreary, Aaron A. B., Arizona, 1920	Tucson, Ariz.	Educ. gr.	Sigma Alpha Epsilon
McCue, Gerald Everet	Colusa	Chem. 62–16	57 Sequoia
[4]McCullough, Willis H.	Austin, Tex.	Econ.	Sigma Alpha Epsilon
McCutchan, John Stanley	Keokuk, Ia.	Econ. 93+17	Alpha Delta Phi
[5]McDaniel, Ivan G. A. B., Stanford, 1920	Salem, Ore.	Law gr.	Kappa Sigma
[5]McDermoth, Alanson W. A. B., Stanford, 1920	Aberdeen, Wn.	Chem. gr.	767 Everett-p
McDivitt, Edith Bernice A. B., Stanford, 1921	Santa Paula	Engl. 67·116+49	355 Roble
[5]MacDonald, Frank Allan	Los Angeles	Pre-Clin. 106·47+48	P.A. Hotel
MacDonald, Harry Felts A. B., Stanford, 1921	SanLuisObispo	C.E. 180+14	310 Encina
McDonald, Marjorie K.	Toppenish, Wn.	Fr. 54·51+85	352 Roble
[1]McDonald, Robert E., Jr.	Berkeley	Geol. 41–33	Sigma Chi
[5]McDonald, Thomas E.	Roganville, Tex.	Law 47+36	1007 Forest Court-p
[4]McDonnell, Ella Gayle	Vallejo	LD	Roble
[4]McDonnell, Mary Agnes	Tacoma, Wn.	Engl. 42·0+0	317 Roble
[1]McDowell, Marie Spencer	Portland, Ore.	Hist. 49+28	KappaKappaGamma
Mace, John Lyndon	San Francisco	LD 42+37	Zeta Psi

McElin, Alice — Kansas City, Mo. — Hist. gr. — 329 Roble
A. B., Chicago, 1916, A. M., Stanford, 1921

McElligott, Merian Helen — San Jose — LD 48+16 — 222 Roble

McElroy, Floyd Lester — Willits — Pol.S.-Law 15·168+73 — 326 Encina
A. B., Stanford, 1921

McEntire, Gerald C. — Santa Cruz — LD 16–19 — 28 Sequoia

McEwen, Harold Lister — Portland, Ore. — LD 39–4 — 357 Encina

[234]McFarland, Ernest Wm. — Phoenix,Ariz. — Pol.S. gr. — 11 Salvatierra
A. B., Oklahoma, 1917

McFarland, Virginia V. T. — San Mateo — Econ. 66–6 — KappaKappaGamma

[234]McFarlane, Christine — Elko, Nev. — LD 29+15 — 157 Roble

MacFarlane, Theresa — Mountain View — LD 43–6 — 348 Roble

McGee, Elisabeth Mann — Oakland — Econ. 49·133+7 — Delta Gamma
A. B., Stanford, 1921

[5]McGee, Frederika Prohl — Pasadena — Econ. 165+143 — 106 Roble

[5]McGill, George F. — Camp Funston,Kan. — Econ. 60+1 — Sigma Nu

[1]McGillivray, Harold P. — Sacramento — Econ. 37·157+0 — PhiKappaSigma
A. B., Stanford, 1921

[4]McGillivray, Malcolm E. — Urbana, Ill. — Educ. gr. — 176 Bryant-p
A. B., Chicago, 1918, A. M., 1921

[12]McGinnis, Sumner Dotts — San Jose — Econ. 45–2 — Zeta Psi

[3]McGrath, Margon James — Palo Alto — LD 6–9 — 567 Forest-p

McHose, John Cresco — Ashland, Ore. — LD 45+17 — Phi Delta Theta

McIntosh, F. Russell — Pachuca, Mexico — Geol. 98+76 — 636 Gilman-p

[12]McIntosh, Raymond Donald — Brawley — Law sp. ‡ 13·17–7 — Alvarado Hall

Macintosh, Richard R. — Santa Monica — LD 46–1 — 200 Encina

[4]McIntyre, Althea C. — Fresno — Hist. — Roble

McIntyre, Glenn H. — Santa Clara — LD 50+28 — 1540 Liberty, SC-sc

Mack, Henry Clayton — Bakersfield — LD 52+41 — 63 Sequoia

[4]McKague, Bruce Carrol — Altoona, Pa. — Geol. 17–31 — 16 Lasuen

McKay, Neil John — Hedgesville, Mont. — LD 46–7 — 336 Encina

[4]McKee, Norman Campbell — Woodside — M.E. — 236 Encina

[3]Mackel, John Edward — Los Angeles — LD 7–13 — 61 Sequoia

[12]McKellar, Donald Hill — Strathmore — M.E. 99+103 — Alpha Sigma Phi

[5]McKenney, Arthur C., Jr. — Belvedere — Phyl.-Med.29·146+138 — PhiKap.Psi

McKenney, Philip Wash — Parlier — LD 38+10 — 205 Encina

[23]Mackenzie, Andrew Nicholls — PaloAlto — Geol. 148·32+31 — 634 Hamilton-p
A. B., Stanford, 1921

McKenzie, Roger Bain — Santa Monica — Med. gr. — 2152 Pine,-SF-sf
A. B., California, 1919

[4]McKericher, Melvin — San Francisco — LD — 1314 Hayes, SF-sf

Mackay, Margaret Gilbert — Los Angeles — LD 41+32 — 117 Roble

[4]McKinney, Bertha — Keating, Ore. — Educ. gr. — Roble
B. S., Oregon, 1907

[12]McKinney, John Wm.	Roswell, N.M.	C.E. 81+51	545 Forest-p
[1]McKinney, Robert A.	Roswell, N.M.	LD 0–15	545 Forest-p
[1]McKinnon, Douglas D.	Hollister	Phyl. 8·115+68	Alpha Delta Phi
[2]McKnight, John Emmett A. B., Washington, 1916	Seattle, Wn.	Min. gr.	667 Channing-p
Mackson, Julius	San Francisco	Law 73·62+18	236 Encina
McLaren, James A. B., Stanford, 1921	San Jose	Chem. 182+67	60 Sequoia
MacLaren, John William	Portland, Ore.	Econ. 156+32	504 Encina
[23]McLaughlin, Frances A.	San Francisco	LD 23–23	251 Roble
[12]McLean, William Ellis	Portland, Ore.	LD	401 Encina
[4]McMaster, William H. A. B., South Dakota, 1914	Corvallis, Ore.	Educ. gr.	675 Channing-p
McMenamin, James Thomas A. B., Stanford, 1921	Sebastopol	Law 37·157+100	321 Encina
McMurtry, Wanda Mabel	Lodi	Econ. 132+55	AlphaOmicronPi
[12]McNally, James P.	Portola	Econ. sp. 30+13	Alvarado Hall
[1]McNary, Elgy Caldwell A. B., Occidental, 1920		Pre-Med. gr.	447 Encina
McNaughton, Virginia G. A. B., Stanford, 1921	San Diego	Hist. 46·134+69	Pi Beta Phi
[4]McNeff, Leereefee	Mt. Sterling, Ill.	LD	329 Hawthorne-p
McNichols, Charles L.	Arizona	Engl. 28+4	83 Sequoia
McPherson, James Douglas A. B., Stanford, 1920	SanJose	Min. gr.	500 Encina
[4]MacQuarrie, Thomas Wm.	Mayfield	Educ.	222 Park Blvd., M-m
[4]McQueen, Donald Hugh	Modesto	LD	15 Encina
McQuoid, H. Meta	Santa Clara	Econ. 67·62+25	Santa Clara-sc
McRae, Donald Kenneth	Lee, Mont.	LD 36–25	348 Encina
[3]MacRae, Richard Loomis	Los Angeles	LD 16+9	Sequoia
[3]McRoberts, James Melvin	Los Angeles	Econ. ‡ 14+8	Delta Upsilon
[12]McSherry, Francis T.	Watsonville	Econ. 71–23	Stanford Union
McSherry, Joseph Michael	Watsonville	Econ. sp. 121+4	Stanford Union
[1]McSkimming, Dent A.	St. Louis, Mo.	Engl. 28+0	83 Sequoia
[1]McTaggart, Garrett Rich	Stockton	Phyl.-Med.135·54–20	11S'lv'tierra
[4]McVey, Allyn	Coronado	LD	127 Encina
[4]McVey, Archie	Coronado	Engl. 31+5	116 Encina
[13]McWilliams, Ramona Inez	Los Angeles	Ed.G.A. 94+3	Chi Omega
Magarian, Gaspar H.	Fresno	Econ. 97+68	56 Encina
[5]Mahoney,Daniel Anthony A. B., Stanford, 1921	SanFrancisco	Med. gr.	545 Encina
Maier, Herman Louis	Burlingame	Econ. 91+53	Burlingame-b
Maillot, Elmer Ellsworth	Alameda	Geol. 85+39	Theta Xi

[5]Malaby, John Richard	Palo Alto	LD 21·45+39	551 Lytton-p
Malinowsky, Joyce	Patterson	LD 40+31	Box 215, Mayfield-m
Mallory, Dora	Fresno	LD 47+27	368 Roble
Mallory, Kirkwood Reeve	Hampton, Ia.	Law 86+22	351 Channing-p
[134]Maloney, John Fuller	San Francisco	Geol. 21–44	Sigma Chi
Mandl, Josephus P.	Phoenix, Ariz.	Law gr.	40 Encina
A. B. Stanford, 1920			
[4]Manfredi, John Vic.	Mt. View	LD	Mt. View-mv
[12]Manley, Richard George	Palo Alto	C.E. 63·105+15	410 Lytton-p
[4]Mann, Arvista	Ione	Educ. ‡	Redwood City-rc
Mann, John	Kankakee, Ill.	LD 44–11	Theta Delta Chi
Mann, Russell Benjamin	Spencer, Iowa	Engl. 90·47+16	39 Encina
Manners, Verda	Riverside	Engl. gr.	Sigma Kappa
A. B., Stanford, 1920, A. M., 1921			
Mannoccir, Ferdinand D., II	Hollywood	LD 46–9	Beta Theta Pi
[5]Mapes, Gordon Walter	Palo Alto	Law gr.	827 Lytton-p
A. B., Stanford, 1920			
[4]Marble, John M.	So. Pasadena	LD	310 Encina
[5]Marcus, Samuel Waldo	Watsonville	LD 48–17	418 Encina
[5]Marino, Herbert Daniel	Stockton	Phyl.-Med. 94·88+33	222 Encina
Marks, Thomas George	Humboldt, Ariz.	Econ. 21·56–27	Sigma Alpha Ep.
[4]Marlow, Arthur Ashley	San Diego	LD	6 Lasuen
Marquis, Vernon M.	Twin Falls, Ida.	M.E. 199+149	346 Encina
A. B., Stanford, 1921			
Marriott, Gladys Georginia	Ventura	Engl. 51·129+20	264 Roble
A. B., Stanford, 1921			
Marsh, Chester	Buhl, Ida.	Phyl. 143+50	115 Encina
[4]Marsh, Louis Howell	Gustine	LD	89 Pierce, SJ-sj
[4]Marshall, DeWitt T.	Modesto	Pol.S.	344 Encina
Marshall, Donald Carlyon	Sunnyvale	LD 47+68	191 Saratoga Rd., S-s
Marshall, Fred Adelbert	Pasadena	Chem. 135·52+26	29 Encina
A. B., Stanford, 1921			
[5]Marshall, Oscar Chauncey	Stanford Univ.	Pre-Clin. 123·57+5	21 S'lv'tierra
[5]Marston, Dorothy	San Rafael	Zool. 170+43	Chi Omega
Marston, Homer Eugene	San Rafael	Phyl.-Med. gr.	422 Encina
A. B., Stanford, 1921			
[4]Martin, Donald Mackenzie	Phoenix, Ariz.	LD	232 Encina
Martin, Edward Davidson	Watseka, Ill.	LD 46+20	107 Encina
[3]Martin, Horace Edmund	Palo Alto	LD 12+6	Cowper Court Apts.-p
[124]Martin, Hugh Bradshaw	Palo Alto	Geol. 22·147–19	Delta Upsilon
[5]Martin, Laurence Butler	Palo Alto	Law 152+125	629 Emerson-p
[4]Martin, Melrowe M.	Sebastopol	Educ. gr.	118 Encina
B. L. California, 1909			

[4]Martin, Vibella A. B., California, 1920	Oakland	Span. gr.	975 Hamilton-p
Martin, Walter Talbot A. B., Stanford, 1920	Phoenix, Ariz.	Econ. gr.	232 Encina
[5]Martini, Iride Ersilia A. B., Stanford, 1921	Palo Alto	Med. gr. 135·61+1	323Hamilt'n-p
[4]Marty, Pearl Ann Ph. B., Buchtel College, 1903	Cleveland, O.	Educ. gr.	Roble
Marx, Alberta A. B., Stanford, 1921	Palo Alto	Bact. 180+89	Kappa Alpha Theta
Marx, Guido Van Dusen A. B., Stanford, 1921	Palo Alto	M.E. 182+100	356 Lincoln
[5]Mason, Arthur John, Jr. M. E., Cornell, 1910	Chicago, Ill.	Min. gr.	Kingscote
[5]Mason, Herbert Louis	Fond du Lac,Wis.	Bot. 38·103+59	415 Encina
[1]Masson, Adele Louise	San Francisco	Hist. 8·53+30	159 Roble
Masters, Alfred Richard	Portland, Ore.	Geol. 95+27	335 Encina
Mathews, Mary Hersey	Los Angeles	Hist. 13·138+164	214 Roble
Mathews, Samuel Salisbury	LosAngeles	Phyl.-Med. 57·119+19	322Encina
[4]Mathews, William Calvin	Madera	Educ. ‡	9 Encina
Matson, Theodore Malvin	Mitchell, Neb.	Chem. 87+29	524 Encina
[4]Maupin, James L.J.	Fresno	Engl.	Zeta Psi
Maurer, Mildred Leanor A. B., Stanford, 1921	Alameda	Engl.182+206	KappaAlphaTheta
[14]Maxwell, William Clarence A. B., Stanford, 1918	San Mateo	Engl. gr. 620	Costa Rica,SM-sm
May, J. Earle	Brunswick, Ga.	LD 43–4	35 Sequoia
[5]May, Raoul Michel	Los Angeles	Zool. 4·164+194	27 Encina
Mayberry, Frances V. A. B., Stanford	StanfordUniv.	Fr. 45·135+143	GammaPhiBeta
Mayer, Leona Minnie	San Francisco	Chem. 68·42+62	178 Roble
[28]Mayer, Mildred	Corcoran	LD 18·28+33	Roble
[4]Maynard,Barron Homer	SanFrancisco	LD	357 Encina
[5]Maynard, Merlin T. R. A. B. Stanford, 1920	San Jose	Med. gr.	2631 Clay, SF·sf
Mead, Florence Hocking	Modesto	Hist. 2·127+128	AlphaOmicronPi
Mead, John Hughes	Los Angeles	Econ. 15·103–26	Zeta Psi
Mead, Myron Wheelock	Chicago, Ill.	Econ. 163+62	Theta Chi
Meads, Norma M.	San Jose	Educ. 67·39+5	AlphaOmicronPi
[1]Mechem, Philip	Chicago, Ill.	Law 40·29+22	AlphaTauOmega
[34]Meek, Helen Elizabeth	Los Angeles	Econ. 58·13+0	314 Roble
Meeken, Duard Oryan	Brighton, Colo.	Econ. 89·45+52	Sigma Chi
[1]Meh, William Chauncey	Canton, China	M.E. 125–28	Chinese Club
Meissner, Ruth Louisa	Lodi	Math. 139+73	AlphaOmicronPi

Melcher, Margaret Sybil San Francisco Med. gr. 2321 Sacramento, SF-sf
A. B., Smith, 1916
[23]Melick, Carlos Franklin San Antonio, Tex. LD 26–9 559 Cowper-p
[12]Melkonian, Leon Fresno Pre-Med. 94·29+13 209 Encina
[4]Melsome, Ruth Marian Los Altos LD Mt. Hamilton, Los Altos-la
Mendenhall, Samuel H. Billings, Mont. LD 44+6 334 Encina
[5]Mendonca, Marcello P. Brazil M.E. ‡ 68+3 Theta Xi
Menees, George Earl Phoenix, Ariz. LD 30–21 400 Encina
Mercer, Andrew St. Joseph, Mo. Chem. 142+132 218 Encina
[4]Meredith, William John Palo Alto Educ. gr.
A. B., Washington, 1900
[5]Merner, Paul M.P. Los Angeles Chem. 31·143+20 1121 Bryant
[23]Merrill, Aurelia Marie Redwood City Math. 93+110 216 Roble
[5]Merrill, Charles White Pasadena Geol. 131+41 57 Encina
Merrill, Ernest Nathaniel RedwoodCity LD 48+21 Box 267, RC-rc
[4]Merrill, Maud Amanda Owatonna, Minn. Educ. gr. 26 Kingscote
A. B., Oberlin, 1911, A. M., Stanford, 1920
[134]Merrill, Ruth Frances Menlo Park Engl. 108+86 Menlo Park-mp
[4]Merriman, Curtis Cheney, Wn. Educ. gr. Kingscote
A. B., Indiana, 1902, A. M., Columbia, 1916
[4]Merritt, Russell Santa Rosa LD 345 Encina
[234]Mertz, Laurence Lewis Evanston, Ill. LD 23–4 Beta Theta Pi
[12]Mertz, M. Hawley Evanston, Ill. Econ. 61·129+47 Beta Theta Pi
A. B., Stanford, 1921
Mertz, Vieth Theodore Evanston, Ill. Econ. 43·46+52 Beta Theta Pi
Messenger, Ivan Rush Jamul Span. gr. 558 Forest-p
A. B., Stanford, 1920
Metzler, William Herman Los Gatos Law gr. 4 Salvatierra
A. B., Stanford, 1919
Meyer, Charles Lorentz Sebastopol M.E. 95+110 202 Encina
Meyer, Eibe Hinrich San Francisco Chem. 199+93 229 Encina
A. B., Stanford, 1921
[4]Meyer, Philip N. Los Angeles LD 224 Encina
[5]Meyers, Robert Koehler Tulare Law gr. 229 Encina
A. B., Stanford, 1920
[4]Meza-Ayau, Arturo Salvador, C.A. LD 20–2 215 Encina
[234]Meza-Ayau, Rafel, Jr. Salvador, C.A. LD 215 Encina
[4]Michael, Wm. Manford Champaign, Ill. Law gr. Alpha Sigma Phi
A. B., Illinois, 1920
Middleton, Avis Long Beach Hist. gr. Madroño
A. B., Kansas, 1915, A. M., Stanford, 1921
[12]Middleton, Herbert Mayfield LD 18–13 422 Princeton, M
[4]Middleton, Neva Long Beach LD 318 Roble
Midgley, Charles Wm., Jr. Oakland Econ. 86+16 Sigma Nu

[4]Millea, Herbert Newell	Los Angeles	LD	303 Encina
Miller, Arthur George	Whittier	Econ. 53–19	Delta Tau Delta
Miller, Charles Emerson	Portland, Ore.	M.E. 155+146	60 Encina
[1]Miller, Edward Floyd A. B., Stanford, 1921	Cordell, Okla.	Geol. 102·78+87	Phi Gamma Delt.
[5]Miller, Elgie Elspeth	San Francisco	Econ. 135+13	Pi Beta Phi
[28]Miller, Eugene Elliott	San Francisco	C.E.22·29+27	MenloHeightsPark
Miller, Evelyn A. B., Stanford, 1921	Santiago, Chile	Psych. 135·46+74	212 Roble
Miller, Frederick H.	So. Pasadena	M.E. 89+60	109 Encina
Miller, Gertrude Lucille	Los Angeles	Zool. 167+18	Sigma Kappa
Miller, Harold Jean	Portland, Ore.	Pol.S.-Law 45·83–18	215 Encina
[12]Miller, Harry David A. B., Stanford, 1921	Ligonier, Ind.	Educ. 135·45+33	446 Hamilton-p
Miller, Holmes Clevenger	Chico	M.E. 93+81	1018 ForestCourt-p
Miller, Hyman A. B., Stanford, 1918	Los Angeles	Med. gr.	2735 Clay, SF-sf
[3]Miller, Knox	Fort Worth, Tex.	LD 23·15+12	353 Encina
[1]Miller, Mary Elizabeth	Palo Alto	Ed.G.A. 137–46	707 Bryant-p
Miller, Ralph Selleck, Jr.	Santa Cruz	LD 43–9	Phi Delta Theta.
[4]Miller, Raymond B. A. B., Stanford, 1918	Terre Haute, Ind.	Educ. gr.	453 Kipling-p
[3]Miller, Russyl Ellwood	St.Anthony,Ida.	Chem. 40·129–26	Theta Xi
[134]Miller, Sarah Kathryn	Los Angeles	Hist. 106+30	Sigma Kappa
Miller, Wallace Jenks.	Los Angeles	Zool. 91·39+14	Delta Upsilon
Miller, Walter George	San Jose	M.E. 14·91+50	250 Encina
[5]Milliken, Paul Hynes	Los Angeles	Geol. 12·108+40	508 Encina
[4]Milliken, Sheldon Spencer	Pasadena	LD	301 Encina
[12]Mills, Bertrand Charles A. B., Stanford, 1921	Los Gatos	Econ. 73·109+24	15 Salvatierra
Mills, Henry Franklin A. B., Stanford, 1921	Stanford Univ.	Econ. 43·139+5	Alpha Sigma Phi
Mills, Russell Holbrook	El Paso, Tex.	Chem. 10·129–17	219 Encina
Minard, Claude Russell	Fresno	Econ. 93+38	306 Encina
Miner, Elliott Steele	Cupertino	Econ. 21·140–3	449 Encina
Minshall, Francis Edward	San Jose	Geol.110–12	372E.S'nCarlos,SJ-sj
Minsky, Louis Bernard	Hollywood	Econ. 40·22+21	562 Encina
[3]Mitchell, Elliott Maxwell	SanFrancisco	Geol. sp.	27 Sequoia
[5]Mitchell, Emery Ferguson	Belvedere	Law 81·90+22	Phi Kappa Psi
Mitchell, Homer Irving	LosAngeles	Law 153+131	Theta Delta Chi
[3]Mitchell, Marie Lucile A. B., California, 1920	Hollywood	Engl. gr.	Madroño
[4]Mitchell, Roberta Hasty	San Jose	LD	Roble

Miyagawa, Frank J.	Kumamoto, Japan	Econ. sp. 101-37	Japanese Club
Miyamoto, Kazuo	Hakalau, Hawaii	Phyl. 12·144+110	Japanese Club
[23]Mizota, George S.	Los Angeles	LD 34+59	Japanese Club
Mode, Morris John	Dinuba	LD 45+28	108 Encina
Moe, Orion Garman	Los Angeles	LD 33–4	21 Sequoia
[124]Mohr, Everett Kingsley	SanFrancisco	Phys. 15–13	Alvarado Hall
[23]Mohr, Florence Ethel	San Francisco	LD 27+12	376 Roble
Moir, Wallace	Los Angeles	Econ. 94·43–1	AlphaTauOmega
Molloy, Alice Kathryn A. B., Stanford, 1921	Palo Alto	Hist. 15·166+40	170 Roble
[1]Molony, Richard Egerer A. B., California, 1920	Los Angeles	Med. gr.	1157 Ramona
[12]Monfort, Marion Strawn	Alva, Okla.	Econ. 58–34	219 Encina
Monroe, Donald Brush	SaltLakeC'y,U.	Engl. 69+8	523 Channing
[5]Monroe, Merton Keith	Monrovia	Law 14·144+4	Alpha Delta Phi
Monroe, Yoves Montairo	Long Beach	LD 39–10	108 Encina
Montague, Richard Aga A. B., Stanford, 1921	Tulare	Chem. 24·202+30	506 Encina
[1]Montalban, Heraclio Rosa A. B., Stanford, 1921	Iloilo, P.I.	Zool. 56·124+74	827 Ramona-p
Montgomery,DonnellGowdy	EagleRock	Pol.S. 58·45+7	59 Encina
Montgomery, Donovan Wm.	San Diego	Econ. 115·28–30	25 Sequoia
Moody, Irwin Walter	San Jose	Geol. 60+71	434 Encina
[23]Mooney, Sheldon James	Seattle, Wn.	Econ. sp. 24–14	Delta Chi
[5]Moore, Charles Arthur, Jr.	Dallas, Tex.	LD 33+11	Phi Kappa Sigma
[4]Moore, Jean Freeman	CentralFalls,R.I.	Educ.	177 Roble
[12]Moore, John Paul	Modesto	Econ. 45–22	Delta Tau Delta
[1]Moore, John Pearce	Colo.Spgs.,Colo.	Econ. 50–28	Kappa Sigma
[3]Moore, Mildred Bernice	Paso Robles	LD 15+23	375 Roble
[4]Moore,Nathan A., Jr.	StanfordUniv.	LD	224 Stanford, M-m
Moore, Raymond W.	Washington, D.C.	Engl. 81·99+53	347 Ramona-p
Moore, Ruby Strachan	Jerome, Ida.	Econ. 87+24	625 Emerson
[4]Moreno, Virginia	Memphis, Tenn.	Fr. 148·17+28	28 Alvarado
[5]Morero, Joseph Ernest	San Pedro	Geol. 98·43+5	52 Encina
[5]Morgan, Ivan Westleigh	Easton, Pa.	Econ.	81 S. Market, SJ-sj
Morris, Cecil Martin	Billings, Mont.	LD 43+7	Alpha Sigma Phi
Morris, George W. E.	Gallup,N.M.	Econ. 53–12	137 Encina
[4]Morris, Harold Nathan	Oxnard	LD	206 Encina
Morris, John Knox, Jr. A. B., Stanford, 1921	Modesto	Med. gr.	1327 Byron-p
Morris, Kathryn	San Francisco	Fr. 81+19	KappaKappaGamma
Morris, Ruth Mabel	Oxnard	Lat. 10·130+130	365 Roble
[4]Morrison, Deming W.	Wheatland, Wyo.	LD	248 Encina

Morrison, Katharine V.	Winters	Ed.G.A. 12·178+65	Alpha Phi
A. B., Stanford, 1921			
Morrison, Roland Jackson	Santa Clara	Engl. 89+22	1196 Main, SC-sc
[12]Mors, George Leander	Los Gatos	M.E. 69+16	434 Encina
Morshead, Merrill C.	San Francisco	Econ. 100·44+29	Kappa Alpha
[5]Mortimer, Wendell Reed	Palo Alto	Psych. 75+19	344 Tennyson-p
[5]Mosher, Albert	Rawlins, Wyo.	Law 100+84	Sigma Alpha Epsilon
[4]Mosher, Harold	Mt. View	Educ.	Mt. View-mv
[1]Mosher, Raymond Mylar	SantaBarbara	Educ.gr.	RFD A,Bx.391,MV-mv
A. B., Stanford, 1919			
[5]Moultrie, Elizabeth L.	Los Angeles	Engl. 59·101+50	Kappa A. Theta
[4]Moyle, Maud M.	Kenwood	LD	157 Roble
[23]Muchenberger,LeannaM.	SantaMonica	Engl. 133+22	Gamma Phi Beta
Mueller, Albert Venlow	Lincoln	Law gr.	40 Encina
A. B., Stanford, 1921			
[12]Mugg, Fred Hodge	Stanford Univ.	M.E. 10·170+119	438 Encina
A. B., Stanford, 1921			
Mulford, Oscar Wayne	Los Angeles	LD 45+12	61 Sequoia
Mullarky, Joseph William	LongBeach	Econ. 135·45+5	Beta Theta Pi
A. B., Stanford, 1921			
[4]Muller Edward P.	San Francisco	LD	335 Encina
[12]Mullin, Wayne Francis	Los Angeles	Econ.-Law96·84+67	BetaThetaPi
A. B., Stanford, 1921			
Mulryan, Henry	Beresford	Geol. 75+72	Beresford-b
[5]Mumford, Patrick Foster	Palo Alto	LD	616 Forest-p
[4]Mundy, Helen M.	Redding	LD	305 Roble
[4]Murata, Thomas T.	San Francisco	LD	Japanese Club
Murcell, Jack Cook	Sacramento	Econ. 52·45–7	Sigma Nu
Murdoch, Christine	KlamathFalls, Ore.	Fr. 92+102	337 Roble
[4]Murphy, Frank L.	Vancouver, B.C.	Law gr.	356 Kingsley-p
Ph. B., Ottawa, 1915, A. B., St. Francis Xavier, 1916			
[4]Murphy, Edgar H.	Vancouver, B.C.	Educ. ‡	Hotel Palo Alto
Murphy, Joe Thomas	Los Angeles	Law 26·158+9	Stanford Union
[4]Murphy, John A.	Salinas	LD	310 Encina
Murphy, Raymond Covert	Salida	Law 60·90–3	404 Encina
[4]Murphy, Russell N.	Burlingame	LD	Burlingame
Murphy, William Henry	Palo Alto	Med. gr.	2329 Sac'to., SF-sf
A. B., Stanford, 1920			
Murray, Paul Chaney	Lodi	M.E. 21·92+27	Sigma Nu
[23]Muscio, Neva	San Francisco	Econ. 99·30+15	Roble
[2]Musser, Luzon Rizal	San Francisco	LD 11–10	512 Encina
[2]Muto, Kaichi	Gifu-ken, Japan	Econ. gr.	Japanese Club
Keiogijuko, 1920			

[23]Muzzey, Isabelle G.	Pasadena	LD 18-30+31	378 Roble
[1]Myers, Beatrice Rider	Los Angeles	LD 2–11	203 Roble
[3]Myers, Burton A.	San Francisco	Med. gr.	2338 Pine, SF-sf
A. B., Kansas, 1919			
Myers, Edwin Forgan	Portland, Ore.	C.E. 92+134	559 Encina
Myers, Irvel	Des Moines, Ia.	Educ. gr.	Madroño
A. B., Drake, 1917			
[1]Myers, Laurence B.	Stanford Univ.	Geol. 76–1	503 Encina
[4]Mylius, Bernard H.	Tucson, Ariz.	Chem.‡	321 Encina
[4]Nanninga, Simon P.	Emporia, Kans.	Educ. gr.	446 Hamilton-p
B. S., Kansas State Normal			
[124]Nara, Shizuma	Oitakan, Japan	Hist. gr.	R2,Box 381 Los Altos-la
A. B., Waseda University, 1910			
[4]Narvestad, Olga M.	Astoria, Ore.	Educ. gr.	209 Roble
A. B., Stanford, 1918			
Nash, Alfred Warren	Oakland	C.E. 81+34	561 Encina
[4]Nass, Pavel V.	Palo Alto	LD	667 Melville-p
Nathanson, Norman Jesse	San Jose	Econ. gr.	429 Encina
A. B., Stanford, 1921			
[4]Nattier, Lillian E.	Neodesha, Kans.	Educ. ‡	359 Roble
Nave, Charles O.	Attica, Ind.	LD 50+23	545 Forest-p
Nay, Dorothy Louise	Pasadena	Ed. G.A. 82-43+14	Roble
[4]Naylor, Blanche	Holton, Kans.	Engl. ‡	Roble
[4]Neal, Finley F.	Topeka, Kans.	Min.&Mt.gr.	Bx602,MenloPk-mp
Washburn College (Kansas)			
[4]Neece, Roland E.	San Francisco	LD	1901 Vallejo, SF-sf
Neer, Jacie	Portland, Ore.	Econ. 150+72	244 Encina
Neer, Phillip Franklin	Portland, Ore.	Econ-Law 106–3	AlphaDeltaPhi
Nef, Kenneth Dunlap	Point Loma	M.E. 77-84–1	Sigma Chi
Neill, Clayton B.	Denair	C.E. 45-96+72	Alpha Tau Omega
[1]Nelles, Frederick C.	Whittier	Educ.	
[23]Nelson, Albert	Eureka	Pol.S. 37+56	207 Encina
Nelson, Armand Gilbert	Spokane, Wn.	LD 19–25	26 Sequoia
[23]Nelson, Arnold Harvey	Clovis	Engl. 68-28+9	345 Encina
[23]Nelson, Elmer John	Clovis	C.E. 73+54	Alpha Tau Omega
[5]Nelson, Frithjof Wm.	Palo Alto	Geol. 16-119+38	750 Channing-p
Nelson, Harry Mortimer	Oakland	Engl. sp. 33+16	Encina
Nelson, Oscar Mathias	San Jose	Chem. 141+188	31 Brooklyn, SJ-sj
Nelson, Roy Frank	Canton, Ill.	Med. gr.	2152 Pine, SF-sf
A. B., Knox College, 1919			
[5]Nelson, Walter Jerome	Spokane, Wn.	Chem. 59-93+24	234 Encina
Nelson, William N.	Fairmont, Minn.	LD 39–22	Phi Kappa Psi
[34]Nemetz, Mildred L.	San Francisco	LD	269 Roble

[3]Nesbit, Reed Miller A. B., Stanford, 1921	Visalia	Pre-Clin. 62·124+115	22 Encina
Nethercut, Ruth A. A. B., Stanford, 1919	Lake Geneva, Wis.	Med. gr.	284 Roble
Neuman, Adolph I.	Pasco, Wn.	LD 49+6	344 Encina
[12]Neuman, Theodore A. B., Stanford, 1921	Turlock	C E. 108·72+20	251 Encina
Newill, Philip	Portland, Ore.	LD 44+51.	428 Encina
[5]Newland, Harvey A. B., Stanford, 1921	Los Angeles	Chem. gr.	Kappa Sigma
Newlin, Carl Allen	Hutsonville, Ill.	Econ. 46·49+22	Phi Kappa Psi
Newlin, Ruth Anne	Fresno	LD 46+57	112 Roble
[12]Newman, William, Jr. A. B., Stanford, 1921	Fresno	Chem. 22·159+230	533 Encina
[4]Newnan, Eva May A. B., Stanford, 1915	Mt. View	Greek gr.	Mt. View-mv
Newnan, Gladys	Mt. View	LD	Mt. View-mv
[8]Newsom, John Branner	Palo Alto	Geol. 141+54	1129 Cowper-p
Newton, Earl Burdette A. B., Washington 1907, M. S., 1916	San Francisco	Med. gr.	S. F. Hosp., SF-sf
[12]Newton, Ford Wilson	Taft	Geol. 120+111	224 Encina
Newton, Glenn DeWitt	Dinuba	LD 46+20	355 Encina
[5]Nicholas, Warren W.	Palo Alto	Chem. 49+77	458 Channing-p
[1]Nichols, Greydon L.	Chadron, Neb.	Law ‡ 4–13	731 Emerson-p
Nicholson, Harold B.	Long Beach	Econ. 51·44+30	Beta Theta Pi
Nickle, Harold Albert	Glendora	Geol. ‡ 31+18	Alpha Tau Omega
[2]Nickle, Neil Clark	Glendora	Geol. ‡ 14+4	28 Lasuen
[5]Niebel, Herbert Lee A. B., Stanford, 1914	Palo Alto	Med. gr.	2749 Union, SF-sf
Niebergall, Herbert A.	Vancouver, B.C.	Phyl. 75+17	15 Encina
[124]Nielson, Adonis Haight	Oakley, Ida.	Law 91·17+17	328 Lytton-p
[23]Nielson, Horton Haight	Oakley, Ida.	Chem. 59·13+5	225 Encina
[12]Nisbet, Eugene G.	Upland	Geol. 23–24	Theta Delta Chi
[4]Nisbit, Clara Lou	Upland	LD	Roble
[1]Nisbit, Virginia G.	Henderson, Ky.	LD	660 Waverley-p
[4]Nitzkowski, Ellen Ph. B., Hamline University, 1912	Mankato, Minn.	Educ. gr.	Roble
[4]Nitzkowski, Florence	Mankato, Minn.	Educ. ‡	Roble
[4]Noble, Burton A.	Los Altos	LD	Los Altos-la
Noble, Margaret Lorain A. B., Stanford, 1921	Los Angeles	Econ. 180+135	Chi Omega
[2]Nogueira, Frederico P.	Campinas, Brazil	M.E.	25 Salvatierra
[34]Nolds, Ida Gertrude A. B., Denver	Denver, Colo.	Educ. gr.	Madroño

Northrop, Robert Starr — San Francisco — Med. gr. — 2442 Sacto., SF-sf
B. S., Michigan Agricultural College, 1901

[4]Northrup, Elsie — Redwood City — Educ. ‡ — Redwood City-rc

[12]Northway, Harry Calvin — Hughson — LD 16–24 — P. A. Military Acad-p

[4]Norton, John K. — San Francisco — Educ. gr. — Encina
A. B., Stanford, 1916

[23]Norton, Robert Adison — Carmel — Span. 8·14–22 — 121 Encina

Nourse, Robert Sylvester — San Francisco — LD 33–24 — 83 Sequoia

Nowell, George Madison — Tulare — Law 123+87 — 505 Encina

Nowell, Nelson Taplin — Honolulu, T.H. — Chem. 87+23 — Theta Delta Chi

Noyes, Elizabeth — Oakland — Fr. 47·45+73 — Delta Delta Delta

Nugent, Donald Ross — San Jose — Econ. 58+24 — 455 S. 9th, SJ-sj

Oberg, Henry Leland — Palo Alto — Econ. 96+141 — 329 Hawthorne

[4]Off, Howard Jerome — Los Angeles — LD — Encina

[4]Off, Theodore R. — Los Angeles — LD — 322 Encina

[5]Ogata, Yaichiro — Kagoshima-ken,Japan — Econ. 3·111+9 — Japanese Club

Ogletree, Henry W. — NewBraunfels,Tex. — Pre-Med. ‡ 13–26 — 307 Encina

[4]O'Hara, Francis P. — San Diego — LD — Phi Delta Theta

[4]O'Hara, Joseph J. — San Diego — LD — Phi Delta Theta

Ohasapian, Aram A. — Clovis — LD 48+1 — 459 Hamilton-p

Okami, Shigeichi — San Pedro — Pre-Clin. 128·44–14 — Japanese Club

[1]O'Keefe, Marjorie E. — San Jose — Econ. 28+12 — 340 Roble

O'Keefe, M. Ethel — Menlo Park — Span. 181+119 — 350 Roble
A. B., Stanford, 1921

[4]Oliva, David M. — San Francisco — LD — 128 Encina

Oliver, Henry McRae — Los Gatos — Geol. 73·111+12 — Theta Delta Chi
A. B., Stanford, 1921

[12]Oliver, Richard Blair — Chico — LD 5–10 — 69 Sequoia

[1]Olmsted, Henrietta E. — Los Altos — LD 10+1 — San Antonio,(LA)

Olmsted, William P. — Los Angeles — Geol. 109+22 — Delta Upsilon

[5]Olsen, Evelyn Petrene — Mt. View — Ed. G.A. 121+106 — Xazmin House

[4]Olsen, Glen F. — Los Angeles — LD — 114 Encina

[1]Olson, Ernest Alvin — Tacoma, Wn. — Law 98·27+30 — 415 Encina

Olson, Ruth Arlene — Brondon, Colo. — Hist. 49·132+55 — 201 Roble
A. B., Stanford, 1921

[1]Ong, Ralph Osborne — Pasadena — LD 15–8 — Phi Kappa Psi

[4]Opgenorth, Olive C. — Tacoma, Wn. — Hist. gr. — 338 Roble
A. B., Wisconsin, 1916

Orcutt, Gertrude Logan — Los Angeles — Fr. 180+155 — KappaKappaGamma
A. B., Stanford, 1921

[12]Ormsby, Herbert Findlay — Escondido — Econ. 21·116+69 — 322 Encina

Ormsby, Walter Arwin — Stanford Univ. — Law 164+18 — 429 Encina

[4]Orr, Paul Wright — Modesto — LD — 203 Encina

[12]Ostman, Thure E.	West Linn, Ore.	C.E. sp. 11–8	Alvarado Hall
[4]Osuna, Anita M.	Albuquerque, N.M.	Span. gr.	146 Roble
State University of New Mexico			
[1]Otani, Kura	Gunmaken, Japan	Educ. gr.	324 Roble
A. B., Illinois, 1917			
Overacker, Horace E.	St. Helena	M.E. 143+79	309 Encina
[4]Overfelt, Charles H.	San Jose	LD	Encina
Overfelt, Dorothy Louise	San Jose	LD 44+28	102 Roble
[4]Overholtzer, Mildred	Claremont	Econ. 16+5	159 Roble
[5]Owen, Jeffie Louise	Morenci, Ariz.	Engl. gr.	240 Roble
A. B., Stanford, 1921			
[23]Owen, William Wallace	Palo Alto	Econ. 40+12	151 Addison-p
Oyama, Takehiko	Kagoshima, Japan	Econ. 25·160+3	Japanese Club
A. B., Stanford, 1921			
[5]Page, Benjamin H.	San Mateo	Med. gr.	225 Minnie, SM-sm
U. S. Naval Academy			
[12]Page, Earl Victor	Campbell	Bot. 39·17–3	14 Sequoia
[12]Page, Katherine	Chocorua, N.H.	Fr. gr.	252 Kingsley-p
A. B., Vassar, 1918			
Page, Marie Iono	Campbell	Econ. gr.	Kingscote
A. B., College of the Pacific, 1920			
Page, Richmond	Brookline, Mass.	Engl.74·49+11	345 Kellogg
[34]Pai, Hu Wu	Kulanjsu, Amoy, China	C.E. 126·59–11	Chinese Club
Palm, Carl David	Kingsburg	Chem. 54·109+18	544 Encina
Palmer, Burton White	Ottawa, Ill.	LD 48+26	227 Encina
Palmer, Chester Bonney	Mt. View	C.E. 97+122	425 Hope, MV-mv
Palmer, Conovan Elliott	Upland	Econ. 53·97+88	Alpha Sigma Phi
Papazian, George Mark	Fresno	Engl. 82·49+1	435 Encina
Papazian, Robert Aram	Fresno	Econ. 41+4	141 Encina
[4]Paris, Claude Henry	San Francisco	LD	17 Encina
Parish, John Thomas	Twin Falls, Ida.	Econ.-Law 52·49+2	451 Encina
Park, Harold Raymond	Spokane, Wn.	LD 38+55	635 Bryant
[1]Parker, Helen Marie	Pasadena	Fr. 50+28	Kappa Alpha Theta
[1]Parker, Melvin Francis	Oakland	Geol. 90–58	Sigma Chi
Parker, Warner Force	Beverly Hills	Econ. 40·142+81	Delta K. Epsilon
A. B., Stanford, 1921			
[3]Parkinson, John F., Jr.	Palo Alto	LD 10+0	616 Cowper-p
[5]Parks, Benjamin Stanley	Los Angeles	Law gr.	Sigma Alpha Epsilon
A. B., Stanford, 1920			
[4]Parks, Charles M.	Cody, Wyo.	LD	Encina
Parlier, Lillian	Fresno	LD 45+20	110 Roble
Parsons, Eleanor	San Bernardino	LD 41+21	176 Roble
Parsons, Eleanor M.	Wellesley Hills, Mass.	Pol. S. gr.	Madroño
A. B., Vassar, 1920; A. M., Stanford, 1921			

[4]Partridge, Ruth E.	Palo Alto	LD	177 Everett-p
Pasquale, Yvonne Alice	San Francisco	LD 49+58	103 Roble
[4]Patacsil, Anselmo G.	Munoz, P.I.	LD	711 Cowper-p
Patacsil, Gregorio C.	Bauang, La Union, P.I.	LD 44+16	14 Alvarado
[3]Patacsil, Luis F.	Bauang, La Union, P.I.	LD	Box 142-p
[4]Paterson, Douglas D.	San Jose	LD	88 Auzerais, SJ-sj
Patrick, John Clarence	Palo Alto	Ent. 175+91	305 Lytton-p
[4]Patrick, Gladys V.	Palo Alto	LD	305 Lytton-p
Patten, Clement Millard	Los Angeles	Econ. 79+2	Phi Gamma Delta
Patterson, Allen A.	Santa Maria	Chem. 5·49+14	409 Encina
[13]Patterson, Edith Adeline A. B., Stanford, 1919	San Jose	Med. gr.	643 So. 6th, SJ-sj
[5]Patterson, Edwin A.	Oakland	Chem. 82+30	Phi Kappa Psi
Patterson, Homer Wm.	Richmond	Law 9·88+71	42 Encina
Patterson, John Wilson	Stockton	C.E. 108–7	Kappa Sigma
Patterson, Wm. Weber	Portland, Ore.	Econ. ‡ 45–16	Sigma Chi
Patton, Alfred Talbot	Berkeley	LD 46+48	226 Encina
Patton, Elizabeth A. A. B., Stanford, 1921	Los Angeles	Hist. 6·175+152	Kappa A. Theta
Patton, Robert Taylor	Spokane, Wn.	Econ. sp. 40·57+32	513 Encina
[184]Paul, Eugene Robinson	Oakland	Geol. 92·72+34	Sigma A. Epsilon
[4]Paulson, Catherine M.	Palo Alto	LD	602 Waverley-p
Paulson, Helen Carolyn	Palo Alto	Ed. G.A. 84+33	602 Waverley-p
Payne, Frances Marshman A. B., Stanford, 1921	Santa Rosa	Engl. 24·175+188	254 Roble
Payne, George Harold	Palo Alto	M.E. 137+88	325 Hamilton-p
Payne, Helen Elizabeth	Santa Rosa	Hist. 135+72	254 Roble
[12]Pearce, Cecil Edward	Sites	C.E. 147+99	537 Encina
Pearce, George Call	Redwood City	LD 40+67	Bx..173RedwoodCy'-rc
[4]Pearce, Mercedes	Redwood City	LD	Bx. 173, Redwood City-rc
[4]Pearson, Leo Earl	Calgary, Alta., Can.	Phys. 18+5	634 Hamilton-p
Pearson, Russel Alderson	Portland, Ore.	Chem. 77·63+61	511 Encina
[1]Pease, Clarence H.	Stockton	Hist. 28·50+8	46 Encina
Pease, Muriel A. B., Stanford, 1921	Bozeman, Mont.	Econ. gr.	Sigma Kappa
Peavy, Claude Edward	Orcutt	M.E. 82+15	335 Encina
Peck, Marjorie Elizabeth A. B. University Southern California, 1920	Los Angeles	Hist. gr.	Madroño
[12]Peckham, Doyle Starr	Watsonville	Engl. 4·139+179	16 Encina
[4]Pell, Helen	Claremont	Educ. ‡	Roble
[1]Pelouze, Robert F. A. B., Stanford, 1921	Eagle Pt., Ore.	Econ. 72·108+40	Sigma Nu
[23]Pennington, Thomas E.	Belmont	Chem. 42·86+22	Bx. 33, Belmont-b

[1234]Penwell, Lewis Fred	Los Angeles	Econ. 68+7	Kingscote
Perham, Don DeBlois	Palo Alto	Greek 11·69+2	335 Melville-p
[4]Perkins, Glen O.	Tucson, Ariz.	Educ. ‡	Kingscote
[5]Perkins, Harold Walter	Stanford Univ.	Chem. 9·154+30	Kingscote
Pernau, Vera Lillian	San Francisco	Fr. 129+72	Alpha Phi
Perrin, Minard Douglass	Coronado	Econ. 81–23	359 Emerson
[5]Perrott, Thelo Albert	Palo Alto	M.E. 42–8	454 Homer-p
[12]Perry, Harold C.	Albuquerque, N.M.	Law gr.	Theta Chi
A. B., Stanford, 1919, J. D., 1921			
[12]Pershing, Richard Scull	Oakland	Econ. 26·113+30	Chi Psi
[4]Peter, Leslie H.	Oakland	LD	10 Cabrillo
Peters, Gertrude Marian	Los Angeles	Span. gr.	208 Roble
A. B., Stanford, 1920			
Petersen, Edna Thelma	Santa Barbara	Ed. G.A. 12·177+181	Pi Beta Phi
A. B., Stanford, 1921			
Peterson, Algot Julius	Kingsburg	Econ. 91+112	422 Encina
[234]Peterson, Hilbert W.	Omaha, Neb.	Econ. 93·32+25	Alpha Sigma Phi
[5]Peterson, P. Victor	Cedar Falls, Ia.	Chem. gr.	601 Channing-p
A. B., Iowa State Teachers College, 1917, A. M., Stanford, 1921			
Petray, Marian Shirley	Oakland	Engl. 59·36+13	Sigma Kappa
[5]Petrini, James	Bakersfield	Law gr.	539 Encina
A. B., Stanford, 1921			
[4]Petta, Joseph N.	Ft. Worth, Tex.	LD	359 Encina
Petty, Mary	Madera	Engl. gr.	Madroño
A. B., Mills, 1920			
[12]Phair, Carter Niles	Palo Alto	Educ. 34·116+79	University Park
[12]Phair, Ruth Edna C.	Palo Alto	Psych. 106+108	University Park
[5]Phelps, Davenport Rees	Stanford Univ.	Phyl. ‡ 65–35	315 Encina
[1]Phelps, Edward J., Jr.	Omaha, Neb.	Econ. 83·90–12	Alpha Delta Phi
[234]Phelps, Eunice Earlene	Phoenix, Ariz.	LD 30+4	Alpha Omicron Pi
[12]Phelps, Harry Raymond	Omaha, Neb.	Law 66·32+10	Alpha Delta Phi
Phelps, John Edmund, Jr.	Los Angeles	Econ. 63–6	Alpha Tau Omega
[5]Phelps, Walter Wesley	Stanford Univ.	Econ. 51·58–11	Beta Theta Pi
[34]Pheney, William D.	Durango, Colo.	Geol. 31·16–7	Beta Theta Pi
[4]Phillips, Donald E.	Pasadena	LD	Encina
[4]Phillips, Frances C.	Palo Alto	LD	337 Hamilton-p
[5]Phillips, Joseph Leslie	Los Angeles	Econ. 23·154+60	Delta Tau Delta
[4]Phillips, La Forrest E.	Palo Alto	LD	337 Hamilton-p
[1]Phillips, Wendell	Oakland	Econ. sp. 24–13	Alvarado Hall
Phinney, Alfred Earl	San Diego	Econ. 91+57	Kappa Alpha
[5]Phyfer, Lamar F.	New Albany, Miss.	Engl. 97·44+24	Sigma Nu
[4]Piazza, Josephine F.	San Jose	Educ.	296 N. 6th, SJ-sj
[23]Pierce, Dorothy Duncan	Los Angeles	Chem. 90·27+28	168 Roble

Pierce, Frederic Ross A. B., Stanford, 1921	Sacramento	Law 16·166+69	Phi Gamma Delta
[5]Pierce, Shelly Nathan	Palo Alto	Econ. 117+50	465 Hamilton-p
[12]Pigott, Chetwynd M.de R.	San Jose	Geol. 11·72+15	449 S. 16th, SJ-sj
Pigott, Paul Richard	Seattle, Wn.	Geol. 82–6	Phi Delta Theta
Pillsbury, Stirling G. A. B., Stanford, 1920	Long Beach	Med. gr.	2735 Clay, SF-sf
Pinkham, LeRoy Samuel	SantaBarbara	LD 19·39–16	Kappa Alpha
Piper, Clarence B. LL. B., Cornell, 1905	Minneapolis, Minn.	Educ. gr.	1001 Cowper-p
Pischel, Dohrmann K. A. B., California, 1918	San Francsico	Med. gr.	1817 Calif., SF-sf
[134]Pison, Glicerio Tejam	Iloilo, P.I.	Chem. 121+68	705 Cowper-p
[12]Pitts, Raymond B.	Bozeman, Mont.	Ent. 120·29+33	Phi Gamma Delta
Pixley, Florence Adaline	Orange	Engl. 86+6	Alpha Omicron Pi
[5]Plaskett, Elmer Webster	Watsonville	Econ. 10·130+8	416 Encina
[1]Platt, Harrison Grey, Jr.	Portland, Ore.	LD	139 Encina
[1]Platt, Lawrence Thayer	Fresno	Econ. 10·42–12	Chi Psi
[4]Platts, John Milton B. S., Rose Polytechnic Institute, 1899	Fresno	Educ. gr.	707 Bryant-p
Playter, Robert Franklin	Joplin, Mo.	LD 49+13	Phi Delta Theta
Plimpton, John E.	Everett, Wn.	LD 47+28	333 Encina
[4]Plincz, Wanda	San Francisco	LD	309 Roble
Plummer, William Ray	San Jose	Econ. ‡ 32–26	449 Encina
[4]Pocock, Ina M. A. B., University of Indiana, 1913	Orland, Ind.	Phyl. gr.	Roble
[5]Podesta, Loyal James	San Francisco	Econ. 47+16	410 Encina
Polesky, Fred Alexander	Long Beach	Pre-Clin. 109·50+8	56 Sequoia
Polhamus, Margaret E. A. B., Stanford, 1921	Los Angeles	Ed. G.A. 100·80+101	Alpha Phi
Pollard, Glenn Eugene	Spokane, Wn.	Geol. 82+30	Alpha Delta Phi
Pollart, Rene	Brussels, Belgium	Med. gr.	Lane Hospital, SF-sf
[4]Pond, Elsie Ada A. B., Stanford, 1919	Tempe, Ariz.	Educ. gr.	Madroño
[4]Poochigian, Karup	Stanford Univ	LD	
[4]Poole, John H.	Redwood City	LD	248 Washington, RC-rc
[4]Pooler, Elizabeth F.	San Francisco	Fr.	Roble
[5]Pope, Florence Emma A. B., State College of Washington, 1918	Benton, Ill.	Engl. gr.	Madroño
Pope, Grace Shaw	Butte, Mont.	Psych. 141+102	268 Roble
[12]Pope, James Edison	Mt. View	LD ‡ 17–19	Mt. View-mv
[5]Popenoe, Herbert	Altadena	Educ. 20·66+69	364 Encina
Porter, Joseph F., Jr. A. B., Stanford, 1921	Kansas City, Mo.	Econ-Law 65·122+124	A.T.Omega

Porter, Lawrence Eugene A. B., Stanford, 1921	Raton, N.M.	Geol. 34·146+38	405 Encina
Porter, Robert Reynolds	San Jose	Econ. 136+60	393 So. 5th, SJ-sj
Postlewaite, Mark A.	SanAntonio,Tex.	M.E. 45·42–2	Theta Xi
Postlewaite, Wm. R.	San Antonio, Tex.	LD 30–16	Theta Xi
[1]Potdar,BhagwantGovind	Bombay,India	Chem. ‡ 10+15	441 Waverley-p
[5]Potter, John Alfred, Jr. A. B., Stanford, 1919	Los Angeles	Min.gr.	522 Encina
Potter, Marion Bucklin	Riverside	Engl.90·40+21	Pi Beta Phi
[3]Poulsen, Frank Edward A. B., Illinois, 1917	Chicago, Ill.	Geol. gr.	449 Encina
[5]Pouppirt, Pearl Sylva A. B., Stanford, 1921	Palo Alto	Pre-Med. gr.	602 Forest-p
Powell, George T.	So. Pasadena	Hist. 71–5	Kappa Sigma
Powell, Robert Churchill	Palo Alto	LD 48+60	431 Lytton-p
Prather, William Edward	Palms	Hist.-Law 81–7	Phi Kappa Sigma
[1]Pray, Ralph Edgar A. B., California, 1920	Valley City, N.D.	Pre-Med. gr.	Sigma Chi
[12]Presho, Nellie E. A. B., Stanford, 1921	San Jose	Chem. gr.	249 Roble
Preston, Harold Orum	Pacific Grove	Hist. 93+52	64 Sequoia
[4]Price, Edwin A. B., University Southern California, 1920	Pasadena	Educ. gr.	Madroño
[4]Price, Henry B.	San Francisco	LD	57 Encina
Price, Joseph Pressly	Oakland	M.E. 49–29	502 Encina
Price, Oser Franklin	Oakland	M.E. 131+120	114 Encina
Prior, Charles Henry	Sheffield, Ill.	Engl. 75+46	32 Sequoia
Prior, Joseph Clifford	Sheffield, Ill.	Econ. 73+86	32 Sequoia
Prior, Leland Stanford, Jr.	Menlo Park	LD 35+0	RFD 149, Menlo Pk-mp
[24]Pritchard, Marion Sara	San Francisco	Econ. ‡ 14–9	Roble
[5]Pritchett, John Perry A. B., Stanford, 1921	Grafton	Hist. gr.	435 Cowper-p
[23]Proctor, Alonzo Burt	Pasadena	LD 30+3	136 Encina
[124]Proctor, Alden A.	Palo Alto	LD 12–10	433 Melville-p
Proctor, Hester E. A. B., Stanford, 1921	Palo Alto	Fr. 77·108+71	Gamma Phi Beta
Proctor, Hudson Milton	San Diego	Psych. 37·84+7	217 Encina
[12]Proctor, Phimister B.	Palo Alto	LD 28+1	433 Melville-p
[12]Prout, Ralph Benton A. B., Stanford, 1921	SaltLakeCity,U.	Econ. 102·81+78	Beta Theta Pi
[4]Provine, George T.	McKinney, Tex.	Econ. ‡	140 Encina
[5]Pryor, Roy Jay	Manteca	Ed. 74·90+67	W. W. Sch. MP-mp
Purdy, Donald F. A. B., Stanford, 1920	Vancouver, B.C.	M E. gr.	329 Encina

[1]Purinton, Roy — Denver, Colo. — M.E. ‡ — 563 Addison-p
[12]Purmort, Charles E. — DesMoines, Ia. — Econ. 49·131+28 — Beta Theta Pi
A. B., Stanford, 1921
Purvis, Ralph Clarke — Tipton, Ind. — Econ. 85+4 — 660 Waverley-p
Putnam, Cecil Monroe — Alameda — Hist. 77+10 — Sigma Nu
[4]Quagelli, Henry J. — San Francisco — LD — Encina
Quigley, Dorothy — El Paso, Tex. — Engl. 129+136 — KappaAlphaTheta
[34]Quinby, James Abram — Palo Alto — Law gr. — 1225 Byron-p
A. B., Stanford, 1919
[12]Quinn, Emmett A. — Gd. Junction,Colo. — Law 158+2 — Phi Gamma Delta
[25]Quinn, Mildred Ruth — Hollywood — Econ. 81·32+19 — Delta Gamma
Quirmbach, Arthur Herman — Needles — Chem. 101–7 — 128 Encina
[23]Quirmbach, Robert Paul — Needles — LD 32+30 — 128 Encina
[1]Radcliffe, Thos. Drew — Birmingham, Ala. — Min. gr. — 525 Encina
A. B., Stanford, 1920
Raick, Julien Oscar — Liege, Belgium — Min. gr. — 22 Lasuen
University of Liege, 1920
[4]Railsbach, Oscar C. — Hanford — Pre-Med. — Sigma Nu
[2]Rakestraw, Norris Watson — Palo Alto — Chem. gr. — 677 Melville-p
A. B., Stanford, 1916, A. M., 1917, Ph. D., 1921
[4]Ramey, Earl — Fredericktown, Mo. — LD sp. — 112 Encina
[3]Ramos, Nemesio M. — Billasis, Paug, P.I. — LD 4–13 — 711 Cowper
Ramsey, Anna Frances — Stanford Univ. — Engl. 115+89 — 20 Lasuen
Rand, Gerald Stevenson — Vancouver,B.C. — Geol. 60·71–6 — Theta Chi
[234]Randall, Claude W. — Palo Alto — Educ. gr. — 612 Waverley-p
A. B., California, 1920
Rankin, Wallace Edmunds — GlenEllen — Hist. 35·97+94 — 87 Sequoia
[23]Rasmussen, Elmer C. — MorganHill — Phyl. 31–37 — Sigma Chi
[4]Ratner, Ezra — San Francisco — Phyl.49–25 — 326 Encina
[1]Ratner, Reuben — San Francisco — Phyl. 145–30 — 43 Encina
[4]Ratzell, Pauline M. — Turlock — LD — 223 Roble
Rau, Thomas Rudolph — Venice — LD 35+5 — Phi Kappa Psi
[2]Raval, Ciriaco Beltram — Laoag, P.I. — Econ. ‡ 16+20 — 705 Cowper-p
Rawhauser, John Gambell — Willows — C.E. 86+96 — 204 Encina
Rawlins, Aubrey Gatliff — Willows — Pre-Clin. 132·61+90 — A.K.Lambda
A. B., Stanford, 1921
Rawlins, George Herndon — Globe, Ariz. — Econ. ‡ 23–6 — 5 Sequoia
[4]Ray, Howard — Roslyn, Wn. — Educ. gr. — Sigma Alpha Epsilon
B. S., Oregon Agricultural College, 1918
Raymond, Paul Everett — Vinton, Ia. — LD 42+54 — 409 Encina
Read, Goodrich — Los Angeles — Engl. 56·50+3 — 19 Salvatierra
[12]Reavis, James Ogden — Bakersfield — Econ. 80+76 — Phi Delta Theta
[4]Redeker, Harry E. — Boise, Ida. — Chem. — 512 Lytton-p

Redeker, Ivan Monroe	Palo Alto	M.E. 90+40	365 Channing-p
Redrup, Arthur Hale	Mansfield, O.	LD 45+12	526 Addison-p
[1]Redwine, Wendell Earle A. B., Stanford, 1919	Stanford Univ.	Law gr.	Delta Chi
[4]Reed, Edward P.	Whittier	Educ.	372 Forest-p
Reed, Myron Carlton	Denver, Colo.	Geol. 34+2	Theta Xi
Reed, Myron Nelson	Portland, Ore.	Econ. 67+23	Beta Theta Pi
[1]Reeder, Fay Spencer	Fresno	Econ. 8-66–22	Delta Chi
Reeder, Jesse Samuel	Fresno	LD 36–1	Delta Chi
[3]Rees, Jack Cardigan	Los Angeles	LD 4–12	
Reese, Lewis	Modesto	LD 45–10	43 Encina
Rehfuss, Carl Wm.	Salem, Ore.	Chem. 135+77	318 Encina
[2]Rehm, Leonard Joseph A. B., Stanford, 1919	Sonora	Econ. gr.	675 Channing
[3]Reichmuth, Anton L.	San Jose	LD 14+0	430 Encina
Reid, Carol Wheeler A. B., Stanford, 1921	Los Angeles	Math. 39-141+76	Delta Gamma
Reid, Katharine	Los Angeles	Econ. 134+64	Delta Gamma
[12]Reid, Robert Henry, Jr. A. B., Stanford, 1921	Los Angeles	Econ. 180+191	Theta Delta Chi
[2]Reid, Walter J.	Lake Toxaway, N.C.	Econ. sp. 10-24–13	Sigma Nu
Reilly, Hubert Bernard A. B., Stanford, 1918, Engineer, 1921	Portland, Ore.	Chem. gr.	536 Encina
[5]Reinhold, Lisle W.	Montrose, Colo.	Geol. 12-130+7	Delta Upsilon
[5]Reiterman, Carl A. B., Stanford, 1921	Palo Alto	Educ. gr.	362 Channing-p
[4]Relph, Harold E.	San Jose	LD	115 Sierra, SJ-sj
Remer, Laura L. Ph. B., Chicago, 1917; A. M., Stanford, 1921	Urbana, Ia.	Educ. gr.	Madroño
[2]Renick, Abbott Frank	New York,N.Y.	Geol. 0–16	Sigma Alpha Epsilon
Rensch, Grace Evangeline A. B., Pomona, 1920	Pasadena	Educ. gr.	100 Roble
[1]Renwick, Wm. Hedley	Menlo Park	Chem. 31–15	Menlo Park-p
[5]Repass, Merle Marion	Hughson	Geol. 106-79+47	203 Encina
[4]Reppy, Vera May	Pasadena	Latin 31-0+0	Kappa Alpha Theta
Reticker, Roland Wilson	Los Angeles	Econ. 39-36–12	Delta Chi
Retterath, Oma Lillian A. B., Stanford, 1921	Williams	Sch. Ed. gr.	Alpha Omicron Pi
Reynolds, Jere Thomas A. B., Stanford, 1920, J. D., 1921	Los Angeles	Law gr.	Kappa Alpha
Rhea, Booth Buford	Pulaski, Tenn.	LD 32–8	Kappa Alpha
[4]Rhodes, Belton	Burlingame	LD	1504 Arc Way, Bur.-b
[5]Rhodes, Mason Marion A. B., Stanford, 1920	Reno, Nev.	Chem. gr.	Sigma Nu

Rhodes, Orlando Hunter	SantaMonica	Econ. 90+62	Phi Kappa Psi
[1]Rice, Laurence E.	Compton	Bot. 39+3	Sigma Nu
[1]Rich, Murray Weis B. S., Colgate, 1919	Montclair, N. J.	Engl. gr.	183 Lytton
[34]Richards, Alma Wilford	Parowan,Ut.	Educ. 12+12	532 University-p
[4]Richards, Lawrence W.	Los Angeles	LD	316 Encina
[5]Richards, Philip Hand A. B., Yale University, 1917	Los Angeles	Law gr.	Beta Theta Pi
[12]Richardson, Alan C.	Washington,D.C.	Chem. 44+31	College Terrace
Richardson, Donald Bird	San Jose	LD 42–6	245 Encina
[23]Richardson, Marg't L.	Los Angeles	LD 24·28+15	378 Roble
Richardson, Paul Eddy	Glendale	M.E. 63–7	Sigma Chi
[5]Richardson, Remond W.	Wash'ton,D.C.	Geol. 10·107+93	Theta Xi
Richardson,RobertD.	Wynnewood,Okla.	Econ. 68–18	201 Encina
Richer, John D.	Los Angeles	LD 46+21	Alpha Tau Omega
Richmond, Carroll L.	Walla Walla, Wn.	Econ. 15·130+24	Phi Kappa Psi
[12]Richter, Charles Francis A. B., Stanford, 1920	Los Angeles	Phys. gr.	49 Sequoia
[1]Riddell, Douglas H.	San Francisco	Engl. 27–7	Alpha Sigma Phi
Ridley, Daniel Graves	San Jose	Pol. S. 79–10	512 Cherry, SJ-sj
[23]Riese, Leon Raymond	San Francisco	LD 31+1	447 Encina
Riffle, Roy Elihu	Walla Walla, Wn.	LD 8·47+10	10 Sequoia
[13]Riggs, Dorothy Marie A. B., Stanford, 1920	Fresno	Fr. gr.	247 Roble
Righter, Cornelius E. A. B., Stanford, 1921	Campbell	Hist. gr.	113 Encina
Rimpau, Edward L. A. B., Stanford, 1921	Hollywood	Law gr.	116 Encina
Rimpau, Genevieve Agnes A. B., Pomona, 1919	Los Angeles	Span. gr.	Chi Omega
Ringle, Arthur Levi	Greeley, Colo.	Zool. 67+3	51 Sequoia
Riordan, Harold J.	San Jose	Chem. 48·35–2	W.W.Sch.,MP-mp
[4]Ripley, Cora Annette	San Jose	Educ.	Roble
[4]Rippey, Stanton	Los Angeles	LD	228 Encina
Risdon, Anita Starr	Independence,Kans.	Econ. 13·107+130	271 Roble
[4]Rising, Franklin	Los Angeles	LD	107 Encina
Ritchie, Kenneth S. A. B., Stanford, 1921	Portland, Ore.	Chem. 182+39	504 Encina
Riter, Randolph B.	Logan, Utah	LD 47+39	11 Sequoia
Robbins, Catherine Jennie	SantaBarbara	Math. 15·124+166	369 Forest-p
[4]Roberts, Ada Jane	Medora, Ind.	LD	327 Roble
Roberts, Fred Gordon A. B., Stanford, 1921	Berkeley	M.E. 126·76+37	227 Encina

Roberts, Milton Louis A. B., Stanford, 1921	San Diego	Econ. gr.	Sigma Chi
Roberts, Perry Buchanan, Jr. A. B., Stanford, 1921	Palo Alto	Geol. 76·122+143	Phi Kappa Psi-p
[1]Roberts, Seymour Jack	Los Gatos	Phil. 31–37	Alpha Sigma Phi
[1]Robertson, Avery E.	San Francisco	Geol. 49–42	Theta Xi
[5]Robertson, Donald L.	Modesto	Phyl. 72+79	206 Encina
[34]Robertson, Kenneth G.	San Leandro	Phil. 70·13+12	Los Altos-la
Robertson, Margaret M.	Redwood City	Phyl.164+22	Kappa Alpha Theta
[5]Robinson, Floyd Amos	Gilroy	Econ. 81+3	555 Encina
Robinson, Jere W., Jr.	Boise, Ida.	M.E. 53·100+26	140 Encina
Robinson, John Hartson	Auburn	Econ. 53–6	330 Encina
[12]Robinson, John Henry, Jr. A. B., Stanford, 1921	Prescott, Ariz.	M.E. 183+13	329 Encina
[1]Robinson, John Randall A. B., Stanford, 1921	Hayward	Hist. 181+103	Kappa Sigma
[4]Robinson, Stanley	Herndon	LD	175 Forest-p
Robison, Russell R.	Jackson	LD 52+13	27 Salvatierra
Robson, Dorothy Joyce	Campbell	Hist. 4·94+109	335 Roble
Rochet, Euphemia A. B., Stanford, 1921	Portland, Ore.	Math. 42·140+43	253 Roble
[4]Rodriguez, Richard J.		LD	127 Encina
Rogers, Ada Birdella	Hanford	LD 44+16	361 Roble
[4]Rogers, Alfred E.	Los Angeles	LD	110 Encina
[4]Rogers, Clare	Letohatchee, Ala.	Ed. G.A. 7+10	220 Roble
Rogers, Eudora Marie A. B., Grinnell, 1916	Grinnell, Ia.	Fr. gr.	Kingscote
[4]Rogers, Frederick R. A. B., Stanford, 1920	Salinas	Educ. gr.	
Rogers, Robert Greene	San Jose	Geol. 41·158–20	Delta Upsilon
[5]Rogers, William Lister	Hayward	Phyl. 102+63	Kappa Sigma
[23]Rohner, Arnold John	Palo Alto	M.E. 117+137	Newell Road-p
[4]Roller, Wendell H.	Palo Alto	LD	404 Cowper-p
Rominger, Dorothy M.	Long Beach	Hist. ‡ 34–19	Kappa K. Gamma
[4]Romney, George S. A. B., University of Utah, 1917	Rexburg, Ida.	Educ. gr.	23 Salvatierra
Roosman, Paul Ferdinand	Kingsburg	Chem. 156+100	303 Encina
[5]Rorke, Harold Bandow	Chicago, Ill.	LD 48–6	Phi Gamma Delta
[18]Rose, Milton I.	Venice	Zool.-Med 90·56+30	25 Salvat'ra
[4]Rosebrook, Genevieve C.	Palo Alto	LD	336 Emerson-p
[5]Rosenbaum, Mervin F.	San Francisco	Hist. 72–6	558 Encina
Rosenblatt, Millard S.	Portland, Ore.	Phyl.-Med. 60·91+137	534 Encina
Ross, Blanch Emline	Redwood City	Span. 89+113	Alpha Phi
Ross, Dean Ralph	Alhambra	Econ. 89+73	Alpha Tau Omega

[4]Ross, Florence S.	Palo Alto	Educ. gr.	451 Channing-p
A. B., University of Nebraska, 1915			
[4]Ross, Howard	Lemoore	Educ. gr.	451 Channing-p
A. B., Miami University, 1916			
Ross, James Gordon	Santa Barbara	Econ. 14·78–23	335 Encina
Roth, Alice Caroline	Willits	LD 45+28	Santa Teresa
[4]Rothschild, Rene L.	Greeley, Colo.	LD	345 Encina
[5]Rouse, Marshall Keene	Mankato,Minn.	Chem. gr.	234 Encina
A. B., Stanford, 1921			
[4]Rouse, Ruth	Watsonville	LD	Roble
[5]Rousselot, Harbin M.	Oakland	Econ. 113+66	Kappa Alpha
Rousselot, Norman A.	Oakland	Geol. 99+70	Kappa Alpha
[1]Rowberry, Wilber N.	Twin Falls, Ida.	LD 15+15	
[4]Rowe, Howard L.	San Jose	Educ. gr.	118 Naglee, SJ-sj
A. B., College of the Pacific, 1919			
Rowe, Merrill Wray	Long Beach	Econ. 97·96+56	Chi Psi
A. B., Stanford, 1921			
Rowell, Milo Edwin	Fresno	LD 38–14	Alpha Sigma Phi
Rowland, DeWitt Clark	Tacoma, Wn.	LD 48+14	322 Encina
Rowland, Gilford Glenn	Blackfoot, Ida.	Pol. S. 95+99	319 Encina
[4]Rowland, Harold H.	Santa Monica	LD	235 Encina
[4]Rowland, Robert R.	Santa Monica	LD	235 Encina
[3]Rowles, Fillmore	Mt. View	LD 8–10	Box 532, MV-mv
[12]Royden, Herbert N., Jr.	San Mateo	M.E. gr.	500 Encina
A. B., Stanford, 1921			
[4]Rozeboom, Edgar	Sioux City, Ia	LD	
Ruby, Jack Lorraine	San Pedro	LD 12–19	Delta Chi
[5]Ruch, Giles Murrel	Eugene, Ore.	Educ. gr.	437 Encina
A. B., University of Oregon, 1914			
[22]Rulofson, Kenneth T.	San Francisco	LD 23+0	Zeta Psi
[4]Rulon, Phillip	Tulsa, Okla.	LD	San Jose-sj
[4]Rumwell, Arnold	San Francisco	LD	57 Encina
[4]Runyan,JamesNelson	EllwoodCity,Pa.	LD	Encina
Russ, Glenn Allen	Carlotta	Engl. 23·86+25	306 Encina
Russell, James Lowell	Palo Alto	Econ. 180+55	Phi Gamma Delta
A. B., Stanford, 1921			
[1]Russell, William Otis	Los Angeles	Law gr.	Kappa Sigma
A. B., Stanford, 1919. J. D., 1921			
Rutter, Cloud Damon	San Francisco	LD 37+4	Theta Chi
Sadler, Marjorie E.	Palo Alto	Math. 45·139+100	420 Homer-p
A. B., Stanford, 1921			
Sager, Charles Harpham	Waukegan, Ill.	LD 29–16	14 Sequoia
Saier, Milton Herman	Fresno	LD 51+13	Theta Xi
[5]Sampson, Richard H.	Los Angeles	Hist. 55+27	Delta Kappa Epsilon

[5]Samuel, Edmund W. Mt. Carmel, Pa. M.E. ‡ 36–5 Box 572, MP-mp
Sanborn, Lewis Hampton Benicia Phyl.-Med. gr. 2735 Clay, SF-sf
A. B., Stanford, 1921
[5]Sandberg, Winfrid Lee Collins, Mont. LD 47+33 Delta Chi
[5]Sanders, Gerard G. Wassenaar, Holland Engl. 67·47+47 666 Tennyson-p
[1]Sanders, Harold E. SiouxFalls,S.D. LD 0–13 5 Sequoia
Sandretto, Paul John B. Fosteria M.E. 96+111 431 Encina
Sands, Albert W. Oakland Geol. 51+31 244 Encina
[5]Sanford, Dudley Phelps San Jose Phyl. 147+18 169 Waverley-p
[23]Sanford, Harold Shas San Francisco LD 24–16 450 Encina
[3]Sano, Joseph Yuzurn San Francisco LD 15–4 Japanese Club
[4]Sansom, Clarence Edmonton,Alta.,Can. Educ. gr. 515 Waverley-p
A. B., University of New Brunswick, 1905
Sansone, John Baptist Toronto, Ont. Geol. 84+47 635 Bryant-p
Sant, George Renshaw San Jose Econ. 39–10 Zeta Psi
Sapero, Kalmen Yokum Long Beach Econ. 90+84 81 Sequoia
[5]Sappington, Emmett Earl Watsonville Phyl. 103·83+83 43 Sequoia
Sargent, Aaron More San Francisco M.E. 83+82 129 Encina
[83]Sargent, Virginia Los Angeles Chem. 46·110+100 Delta Gamma
Saunders, Cyril Everett Manilla, Ia. Law gr. 758 Waverley-p
A. B., University of Iowa, 1918
[5]Saunders, Lowell Waller Red Bluff Geol. 63–16 Phi Kappa Sigma
Sawyer, Theo. Kremer Swarthmore,Pa. Geol. 417 Encina
[1]Schaf, Leonard Carl Los Angeles C.E. 57+43 265 Coleridge-p
[5]Schall, Wheeler F. Ft. Collins, Colo. Econ. sp. 10·34+5 11 Slavatierra
Schaper, Edward Andrew Tacoma, Wn. Med. gr. S. F. Hospital, SF-sf
A. B., College of Puget Sound, 1917
Schardin, Helen K. Sacramento LD 18·41+48 300 Roble
[4]Scheib, Howard J. Denver, Colo. LD 7–1 Phi Delta Theta
Scherf, Elmer Emil San Jose Econ. 91+49 Delta Tau Delta
[12]Schick, Albert La Valle StanfordUniv. Chem. 62–28 530 Encina
[134]Schilling, Dorothy C. Palo Alto Engl. 21·152+160 705 University-p
[4]Schlein, Walter Chas. Fresno Educ. 9+4 685 S. 5th, SJ-sj
Schlesinger, James Wm. Lee San Fran. Econ. 14·43+2 Sigma Nu
Schmid, Harold Wm. Oberon, N.D. LD 37–1 642 Webster-p
[4]Schmidt, Leonie E. Redwood City Engl. gr. Redwood City-rc
A. B., Oberlin, 1914
[23]Schmieder, Fremont R. San Francisco LD 32+29 1551 Emerson-p
[1]Schneider, Phillips Sumner Berkeley Econ. 54–11 Zeta Psi
Schnitzer, Ralph S. Houston, Tex. Chem. 82+6 532 Encina
[4]Schofield, Frank C. Palo Alto Engl. gr. 751 Channing-p
A. B., Ohio, 1895; A. M., 1897
[4]Schroter, Florence San Mateo Hist.

Schultz, Alfred Fred	Tripoli, Ia.	LD 48–4	Wm. W. Sch., MP-mp
[234]Schultzberg, George	Salinas	Educ. 104·39+37	243 Waverley-p
Schulz, A. Harold	San Francisco	LD ‡ 25–15	110 Encina
Schulz, Lester Raymond	Dillon, Mont.	LD 24–32	Kappa Alpha
Schumacher, John	Los Angeles	Law 172+7	Phi Gamma Delta
Schuster, Helen	Los Angeles	Econ. 135+81	371 Roble
Schwab, Lloyd Elwin	Alturas	C.E. 107+23	315 Encina
[4]Schwartz, Karl Roger	Santa Monica	LD	Phi Kappa Psi
[12]Schwartz, Laura Virginia	San Jose	Engl. gr.	103 Randol, SJ-sj
A. B., College of the Pacific, 1920; A. M., Stanford, 1921			
Schwartz, William Francis	SantaMonica	Econ. 83–13	20 Alvarado
[12]Schwartz, William Leonard	StanfordU.	Fr. gr.	Madroño
A. B., Ohio Wesleyan, 1910; A. M., Stanford, 1920			
[1]Scofield, Norman McCray	Palo Alto	M.E. 113–28	Theta Xi
Scofield, Philip Forest	Palo Alto	LD 40–2	430 Kingsley-p
[4]Scott, C. Emlen	San Mateo	Bot. gr.	780 SM Drive, SM-sm
A. B., Stanford, 1917			
Scott, Clyde H.	Santa Barbara	C.E. 157·61+14	500 Encina
A. B., Stanford, 1921			
Scott, Josephine	Los Angeles	Hist. 81+55	338 Roble
[1]Scott, Lorin Marcellus	Los Gatos	M.E. 111–2	Phi Kappa Sigma
[5]Scott, Raymond Robert	Selma	Zool. 79+85	422 Encina
Scribner, Harold W.	San Francisco	M.E. 110+34	40 Sequoia
Scribner, Theodore E.	San Francisco	LD 45+57	66 Sequoia
Seaman, Wesley Albert	Marshfield, Ore.	Law 29·113–4	25 Salvatierra
[12]Searcy, Helene W.	Durango, Colo.	Bact. 122+75	206 Roble
[4]Searight, Jeanette	Santa Barbara	Engl. ‡	222 Roble
[1]Sears, William Harold	DesMoines, Ia.	Engl. 21+0	Sigma Chi
[12]Sebastian, Charles F.	Los Angeles	Med. gr.	Lane Hosp., SF-sf
A. B., Stanford, 1919			
Seelig, Miriam	Los Angeles	Econ. 141+227	365 Roble
[5]Seib, Lester Leo	Hollywood	Econ. 135+49	Alpha Delta Phi
[5]Seitz, Roland P	San Francisco	Med. gr.	2871 Clay, SF-sf
A. B., Stanford, 1919			
[5]Selna, Adelne A.	Stockton	Pre-N. 4·96+92	346 Roble
Semino, Angelo	Mt. View	M.E. 34·120+157	Mt. View-mv
[12]Semino, Norma Mary	Mt. View	Fr. 45·44+51	Mt. View-mv
Senior, Clair Marcil	Salt Lake City, Utah	Law 40·89+143	59 Sequoia
Senior, Ruth Edith	SaltLakeCity, Utah	Engl. 92·93+129	246 Roble
A. B., Stanford, 1921			
[5]Senter, Wm. Allen, Jr.	SaltLakeCity, Utah	C.E. ‡ 25–9	28 Sequoia
[5]Sentous, Alvin Alphonse	Los Angeles	Geol. 159–17	DeltaKappaEpsilon
Serrurier, Lawrence R.	Portland, Ore.	Chem. 140+197	510 Encina

Sette, Oscar Elton	Chula Vista	Zool. 84·45+49	65 Sequoia
[34]Severy, Hazel A. B., Stanford, 1907	Pasadena	Chem. gr.	Delta Delta Delta
[5]Sewall, Russell Williams	Portland, Ore.	Law 34·137+27	Chi Psi
Sewell, Charles Alvin	Elko, Nev.	Econ. 90+69	Sigma Alpha Ep.
Seymour, David Bruce	Santa Rosa	LD 44+15	302 Encina
Shamberger, Elizabeth Strong A. B., Stanford, 1921	Palo Alto	Hist 7·173+16	707 Bryant-p
Shamberger, Hugh Allan	Payette, Ida.	C.E. 142–17	29 Encina
[34]Shannon, Patrick	Palo Alto	Chem. sp. 10+1	Alexandria Htl.-p
[1]Sharp, Baxter Rice A. B., Stanford, 1921	San Francisco	Econ. 3·179+107	Theta Delta Chi
[12]Sharp, Helen Elizabeth A. B., Stanford, 1921	Palo Alto	Chem. 186+122	951 Hamilton-p
Sharp, John Chester	Seattle, Wash.	Phyl. 11·117+75	Theta Chi
Shaull, Ethel Mae	Los Angeles	LD 45+82	368 Roble
Shaw, Elton Sutherland	San Jose	M.E. 51·108+10	Delta Upsilon
Shaw, Perry Mason	Berkeley	Econ. ‡ 48–25	Sigma Chi
Sheahan, Edward K.	Ocean Falls, B.C.	Law 34–22	Beta Theta Pi
[4]Shearer, Cecilia L.	San Jose	Educ.	179 Park, SJ-sj
Sheffield, Carlton Allyn	Long Beach	Engl. 92+40	32 Encina
[14]Sheldon, Althea M. A. B., University of Washington	Selma	Engl. gr.	Madroño
[5]Sheldon, Frances E.	Los Angeles	Law 119+161	Gamma Phi Beta
[4]Shepard, Arthur E.	Fresno	LD	22 Encina
[4]Shepard, Orson C.	San Jose	LD	141 Encina
[4]Shepard, Harold A. B., Stanford, 1919	Paris, Idaho	Law. gr.	1027 Bryant-p
Shepard, Stella Dorothy	San Jose	LD 45+17	219 Roble
Shepardson, Ruth T. A. B., Minnesota, 1916	San Francisco	Med. gr.	2401 Sacto., SF-sf
[5]Shepherd, Theodore H.	Hollywood	M.E.	22 Sequoia
Sherer, Horace Carroll	Long Beach	C.E. 61·48–3	727 Cowper-p
[1]Sherman, Marjorie T. B. S., Columbia University, 1912	Bronxville, N.Y.	Educ. gr.	798 Palo Alto-p
[12]Sherman, Mark	San Francisco	Chem. 52·128+88	406 Ramona-p
[5]Sherman, Richard Wade	Palo Alto	Geol. 55·72+21	Sigma Nu
[12]Sherman, Thomas Hall	Palo Alto	LD 9–5	427 Webster-p
Sherrard, Dorothy Addine	Los Angeles	Engl. 4·138+191	Alpha Phi
Shevky, Richard	San Francsco	Phyl. gr.	2186 Calif., SF-sf
[5]Shiels, William Charles	San Francisco	Econ. 10·109+45	Phi Delta Theta
[4]Shipkey, Harry Hector	Fullerton	LD	29 Encina
Shipp, Kenneth James	Watsonville	Econ. 91+79	Delta Chi

Shlaudeman, Karl Whitman A. B., Stanford, 1921	Pasadena	Law 180+6	Chi Psi
[134]Shlaudeman, Robert	Pasadena	Econ. 122+24	Delta K. Epsilon
Shoenhair, George John, Jr.	Los Angeles	LD 44–2	Delta Upsilon
[4]Shott, Ralph N.	Birmingham, Ia.	Pol. S. ‡	
Shoup, Carl Sumner	Los Altos	LD 46+82	Phi Delta Theta
[5]Show, Joseph Henry	Palo Alto	Geol. 123+23	353 Melville-p
Sibley, John Thornton	Los Angeles	Econ. 136+9	Phi Gamma Delta
Siddle, Robert William	Cody, Wyo.	Zool. 81+32	Menlo Heights
Sidway, Charles Lee	Ocean Park	LD 45+2	116 Encina
[1]Siebert, Alfred A.	Honolulu, T.H.	Pre-Clin. 4–13	115 Circle-p
[1]de la Sierra, Enrique	Palo Alto	M.E. 0–16	611 Bryant-p
[12]Sifford, Roy D. A. B., California, 1917	Susanville	Law gr.	Encina
[12]Silen, Bertrand Harold	Boise, Ida.	Econ. 55–13	Kappa Alpha
[5]Silveira, Joseph T.	Sebastopol	Geol. 125+99	317 Encina
[3]Silver, Charles Richard	WarmSprings	LD 15–1	12 Sequoia
[4]Silverberg, Jane	San Mateo	LD	San Mateo-sm
[5]Simmons, Rouse	Portland, Ore.	Geol. 104+142	Chi Psi
Simmons, Samuel B.	Sacramento	C.E. 48–4	Zeta Psi
[12]Simon, Dewey Oscar	Ely, Nev.	Econ. 116+80	416 Encina
Simons Herbert Rule	Riverside	Geol. 40+20	Delta Tau Delta
[4]Simonsen, Lauretta C.	Palo Alto	Educ. ‡	535 Homer-p
Simonton, Dorothy Jean	Wendell, Ida.	Hist. 86+17	Delta Delta Delta
[4]Simonton, Margaret	Wendell, Ida.	Pol. S.	204 Roble
[5]Simpson, John Edwin C. A. B., Stanford, 1921	Fresno	Law gr. 184+52	539 Encina
[12]Simpson, Matthew Cheney A. B., Stanford, 1921	LongBeach	Law 180+238	Alpha Sigma Phi
[1]Simpson, Stewart	San Francisco	Geol. 68+59	634 Hamilton-p
[234]Sinclair, Jesse Donald	Lakeville	Geol. 55–7	Theta Delta Chi
[5]Singh, Jalwant	Amritsar, India	Pol. S. 59–7	553 Encina
[4]Sinnott, Ethel Clare	Palo Alto	Educ. ‡	535 Kingsley-p
[4]Skelton, Leland R. A. B., Stanford, 1917	Palo Alto	Law gr.	712 Waverley-p
[12]Skinner, Edward D., Jr.	Los Angeles	Geol. 38–26	Sigma Alpha Epsilon
Slater, Donald Coulter	Tranquillity	Econ. 45+6	Delta Chi
Slater, Herbert Nichols	Oakland	Pre-Med. 97-57–5	532 Homer-p
[4]Slater, Kenneth N.	Mt. View	Educ. 22+16	Mt. View-mv
Slingerland, Jacob	Venice	LD 45+59	111 Encina
Sloan, George Westall	Palo Alto	Econ. 148+75	815 Cowper-p
Sloan, Mary Caldwell	Phoenix, Ariz.	Zool. 155+173	Sigma Kappa
Sloan, Thomas Kemp	Mt. View	Chem. 91+46	Mt. View-mv

Sloss, Richard Louis	San Francisco	LD 47+45	23 Encina
Small, Edwin Warren	Palo Alto	M.E. 130+38	921 Scott-p
Smith, Archie A.	Fresno	LD 45–2	Sigma Nu
Smith, Carl Victor	Oakland	Law 85·109+32	19 Encina
A. B., Stanford, 1921			
[3]Smith, Cecil Jules	Los Angeles	LD 15+2	251 Encina
Smith, Charles Gordon	Campbell	Econ. 139+66	328 Encina
Smith, Charles Herbert	Saratoga	M.E. 87+43	Saratoga-s
Smith, Dorothy	Ithaca, N.Y.	Hist. 143+17	Kappa Alpha Theta
[4]Smith, Earle Duane	Waterman	Educ. gr.	
P. H. B., Wisconsin, 1920			
[4]Smith, Earle F.	Palo Alto	LD	1100 Hamilton-p
[3]Smith, Edgar Tevis	Los Angeles	LD 15+16	356 Kingsley-p
[4]Smith, Edwin Oscar	Pasadena	Psych. gr.	129 Encina
A. B., McKendree College, 1908, A. M., 1909			
[4]Smith, Erna	Denver, Colo.	Econ. ‡	257 Roble
[12]Smith, Florence M.	Los Altos	Econ. 182+82	314 Roble
A. B., Stanford, 1921			
[4]Smith, Forrest V.	Kewanee, Ill.	LD	620 Gilman-p
[4]Smith, F. Thornton	San Jose	LD	Cooksey Lodge
Smith, Francis Albert	Palo Alto	Chem. 37·93+121	600 Lincoln-p
Smth, George James	San Francisco	LD 45+39	Theta Chi
[12]Smith, George Keil	Napa	LD 32–13	353 Encina
[23]Smith, Harrison Painter	LosAngeles	Chem. gr.	428 Encina
A. B., Stanford, 1920, Chemical Engineer, 1921			
[3]Smith, Henry Perry	Palo Alto	LD 10–2	1100 Hamilton-p
[5]Smith, Irving M.	Palo Alto	Pol. S. 42·88+2	731 Emerson-p
Smith, Irving Murray S.	SanFrancisco	LD 48+10	408 Encina
Smith, J. Howell	Big Creek	Econ. 88+65	Zeta Psi
Smith, James Holland	Santa Barbara	Engl. 41–12	206 Encina
[4]Smith, Jessie Edna	Redwood City	Fr. gr.	555 Lytton-p
A. B., Stanford, 1916			
Smth, Lemuel Coats, Jr.	El Paso, Tex.	M.E. sp. 10·46–16	365 Lincoln-p
Smith, Lewis Anderson	Pearce, Ariz.	Geol. 10·162+65	Theta Xi
Smith, Mary Norris	Palo Alto	Engl. 8·176+169	1335 Cowper-p
A. B., Stanford, 1921			
[4]Smith, Norwood B.	Redwood City	LD	Redwood City-rc
Smith, Philip Grey	Los Molinos	Pre-L. 67·47+57	24 Sequoia
[5]Smith, Phoebe Marcella	Los Angeles	Econ. 165+37	Delta Delta Delta
[23]Smith, Ralph Orace	Leland, Ida.	Hist. gr.	29 Salvatierra
A. B., Idaho			
Smith, Richard Chatfield	New York, N.Y.	Engl. 6·88+27	51 Sequoia
[4]Smith, Ross Stewart	Palo Alto	LD	920 Waverley-p

Smurr, Charles Franklin	Los Angeles	LD 46+1	Kappa Sigma
Snell, James Hall	Browns Valley	LD 44+12	127 Encina
[3]Snitjer, Wm. Chandler	San Jose	LD 14–1	430 Encina
[5]Snook, Walter Bonnard	Berkeley	Geol. 34·51–6	Sigma Nu
Snow, Abby Joy	Boise, Ida.	M.E. 144+188	246 Encina
Snow, William Boring	New York,N.Y.	M.E. 93+122	44 Sequoia
[1]Snyder, Chester Delmont	Lamar, Colo.	Econ. 10·54+2	54 Sequoia
[4]Snyder, Harry Lay	Palo Alto	LD	133 Addison-p
[4]Snyder, Lucille H.	San Jose	Educ. 88·0+0	317 Roble
Somerfield, Harry A., Jr.	Cincinnati, O.	Pre-Clin. 135·50+70	327 Encina
A. B., Stanford, 1921			
Somers, Melvin Ralph	Los Angeles	Chem. 44·40+5	501 Encina
Sortor, Charles Holland	Tulare	M.E. 87+83	365 Lincoln-p
Southwell Wm. Lee	American Falls, Ida.	Law 129+13	233 Encina
deSouza, Luis Jose	Quepem, Goa, India	Hist. 90·107+117	Sequoia
A. B., Stanford, 1921			
[12]Souza, Manuel E.	San Luis Obispo	M E. 43+10	318 Emerson-p
[4]Sowers, Vivian K.	Indianapolis, Ind.	Engl. ‡	159 Roble
[1]Spangard, Christian L.	Oakland	Econ. sp.	2039 E. 16th, O-o
[4]Spangler, Raymond L.	So.San Francisco	LD	S. San Francisco-ssf
[5]Sparks, Dale Darrell	Valparaiso, Ind.	Geol. 35+12	401 Encina
Sparling, Edward J., Jr.	Hollister	Econ. 44·139+29	Alpha Delta Phi
A. B., Stanford, 1921			
[4]Spaulding, Benj. W.	Oconomowoc, Wis.	Educ. ‡	State Teachers' Col.,SJ
Spaulding, Ruth Isabel	Palo Alto	Econ. 135+84	528 Channing-p
Spears, Julia Buckner	Dallas, Tex.	Engl. 90+70	242 Roble
[13]Spencer, Lawrence M.	Fellows	Geol. 97·84+68	Phi Kappa Psi
A. B., Stanford, 1921			
[4]Spencer, Masten	San Francisco	LD	W. W. Sch., MP-mp
[4]Spencer, Percival I. V.	Los Angeles	LD	345 Encina
Spencer, R. Phillip	Pasadena	LD 44+47	200 Encina
[4]Spencer, Winona	Los Angeles	Educ. ‡	331 Roble
[4]Sperry, George Sanford	Palo Alto	Educ. gr.	804 Bryant-p
A. B., College of the Pacific, 1920			
[12]Spieler, Nathaniel F.	San Francisco	LD 27–3	512 Encina
Spielman, John Van V.	Long Beach	C E. 7·144+121	117 Encina
[5]Spiers, Robert Joshua	Middletown	Geol. 140+72	Kappa Sigma
[134]Spilman, Elizabeth Brewer	Palo Alto	Econ. 120+180	471 Addison-p
[12]Spilman, Ruth Lee	San Mateo	LD 29+40	276 Roble
[12]Sponsler, Selden Ruger	Palo Alto	Chem. gr.	330 Embarcadero-p
A. B., Michigan, 1914			
Spratley, John W., Jr.	Palo Alto	M.E. 14·106+37	1047 Ramona-p
Spratling, Hosea Wilbur	Gorman, Tex.	LD ‡ 32–31	305Churchill, Bx. 46-p

[4]Spring, Carl Wm.	Cupertino	LD	Cupertino-c
Sprott, Mary Esther A. B., Stanford, 1920, A. M., 1921	Porterville	Hist. gr.	Gamma Phi Beta
Sproull, Henry Franklin	San Jose	Chem. 5·90+11	Beta Theta Pi
Spurlock, Franklin, Jr.	Covelo	Geol. 59–2	417 Encina
[12]Spurlock, Horace E. A. B., Stanford, 1921	Covelo	Geol. 161+91	417 Encina
[1]Squires, Anita Marian A. B., Stanford, 1920, A. M., 1921	Los Angeles	Math. gr.	264 Roble
Stacy, Kenneth Nymphas	San Jose	Econ. 96·83+12	318 N. 6th, SJ-sj
[12]Stamp, Wade Moore A. B., Stanford, 1921	Long Beach	Econ. gr.	232 Encina
[5]Stanbery, William Barber	Los Angeles	Econ. 94+19	Sigma A. Epsilon
[4]Stanford, Leland Ghent	San Diego	LD	113 Encina
Stanley, Camillus Russell	Palo Alto	M. E. 107+14	269 Hawthorne-p
[1]Stanley, George Elmer	Palo Alto	Geol. 87–2	269 Hawthorne-p
[1]Stanley, Helen Marjorie A. B., College of the Pacific, 1919	San Jose	Engl. gr.	771 Asbury, SJ-sj
Stanton, Elna Cicelia A. B., Stanford, 1921	Avalon	Engl. 181+116	Alpha Phi
Stanton, Pauline Dickinson	Pasadena	Fr. 97·41+27	333 Roble
Stark, Herbert Spencer	Palo Alto	M.E. 136+30	500 Melville-p
Starkey, Charles Ward A. B., Stanford, 1921	Whittier	Chem. gr.	Theta Chi
Starkey, William E.	Whittier	LD 36+19	Theta Chi
Starks, Dorothy Johanna	Palo Alto	Zool. 95+148	1115 Ramona-p
[4]Starr, Walter A.	Piedmont	LD	201 Encina
[4]Stauf, Ida A. B., Stanford, 1910	Palo Alto	Fr. gr.	515 Lytton-p
[124]Stearns, Ross Edward	Lost Hills	LD 18–14	Alpha Sigma Phi
Steele, Archie Trojon	SaltLakeCity,Utah	LD 47+15	435 Encina
Steiger, Katherine	Vacaville	Econ. ‡ 39–2	Alpha Omicron Pi
[4]von Stein, Mary Gertrude A. B., Stanford, 1919	Pomona	Math. gr.	244 Roble
[1]Steinbeck, John Ernest	Salinas	Engl. 10–28	434 Encina
[5]Steindorf, Stanley Archie	Campbell	Econ. 130+62	216 Encina
[12]Steineke, Max A. B., Stanford, 1921	Brookings, Ore.	Geol. 183+66	546 Encina
[4]Steinhart, Claire H.	Santa Clara	LD	Santa Clara-sc
Steinmetz, Ruth Lolita	Palo Alto	Span. 154+155	1021 Ramona-p
[1]Stelling, Emma Gladys A. B., Stanford; 1921	San Jose	Ed. G.A. 86·94+124	Alpha O. Pi
[4]Stenberg, Franklin R.	Fresno	LD	112 Encina
[4]Stephens, Jack Stewart	Los Angeles	LD	322 Encina

[12]Stephenson, Lowell J.	Wellston, O.	LD 19–12	410 Lytton-p
[1]Sterling, Marie Louise	San Jose	Hist. 79+25	KappaKappaGamma
[5]Sterling, Theodore K.	Denver, Colo.	LD 47+2	Sigma Alpha Epsilon
Stern, Bert Price	Redondo Beach	Chem. 134+70	305 Encina
Stern, Ruth Esther	Portland, Ore.	Econ. 94+145	336 Roble
[34]Stettheimer, Barbara	Redwood City	LD 29+25	Redwood City-rc
Stevens, Howard	Rockford, Ill.	LD 44+26	Theta Chi
Stevenson, Doris Maude	Alhambra	Econ. 128+22	Chi Omega
Stevenson, Robert Clifford	Boise, Ida.	C.E. 49·91+63	234 Encina
Stevenson, William C.	Boise, Ida.	M.E. 137+81	246 Encina
[5]Stewart, Coleman Everett	S. Barbara	Law gr.	44 Encina
A. B., Stanford, 1921			
[234]Stewart, Donald Kenneth	Palo Alto	LD 24–4	311 Fulton-p
[5]Stewart, Duncan	Calgary, Can.	Chem.73·100+48	68 Sequoia
[4]Stewart, Eskaleen	Tulare	Educ. ‡	603 Delmas, SJ-sj
Stewart, Francis Samuel	San Diego	Chem. 92+1	524 Encina
[4]Stewart, Hugh L. P.		LD	Encina
Stewart, Kenneth Norman	Eureka	Engl. 87+33	Alpha Sigma Phi
Stewart, Marian Bernice	Stockton	Ed. G.A. 49·132+47	347 Roble
A. B., Stanford, 1921			
Stewart, Muriel	Phoenix, Ariz.	Engl. 6·68+70	321 Roble
[5]Stewart, Paul Fisher	Kansas	Econ.-Law 30–13	PhiDeltaTheta
Stice, Robert Henry	Red Bluff	Econ. 121+5	Phi Kappa Sigma
[4]Stichter, Genevieve S.	Cupertino	LD	Cupertino-c
[4]Stikeman, Donald Frank	Santa Cruz	LD	121 Encina
Stillman, Freeman Linn	Anthon, Ia.	LD 43–3	344 Encina
Stillwell, Rachel Nita	South Pasadena	Engl. 80+67	177 Roble
A. B., Stanford, 1921			
[4]Stinson Jessie Marie	Modesto	LD	Roble
Stipp, Thomas Franklin	Ukiah	Geol. 170+111	425 Encina
Stockton, Andrew B.	Grangeville, Ida.	Zool. 95+77	704 Bryant-p
[1]Stoddard, Dower Kenneth, Jr.	Merced	Econ. 95–32	Delta Upsilon
Stolz, Harry Phillip	San Mateo	Geol. 202+85	Theta Xi
A. B., Stanford, 1921			
[4]Stolz, Violet Bertha	Santa Ynez	Econ. 12+4	250 Roble
Stone, John Bear	San Francisco	LD 30+21	951 Hamilton-p
[4]Storm, Eugene Max	El Monte	LD	304 Encina
Stote, Helen Marshall	Colo. Spgs., Colo.	Engl. 135+60	Delta Gamma
A. B., Stanford, 1921			
Stout, Gurn Thompson	Los Angeles	Pre-Med. 30–7	660 Waverley-p
[12]Stovall, William Byron	Philomath, Ore.	Engl. 78+35	42 Encina
Strachan, Lexie	Dufur, Ore.	Sch. Ed. gr.	Madroño
B. S., Oregon, 1920, A. M., Stanford, 1921			

Strain, Harold Henry	Palo Alto	LD 52+21	Mayfield-m
[12]Strain, Herbert Gerald	Palo Alto	ME. 129+56	945 Webster-p
[3]Strand, Suerre B.	Benson, Minn.	C.E. sp. 29–5	741 Palo Alto av.-p
[4]Straube, Herman Wm.	Los Angeles	LD	303 Encina
[4]Strauss, John H.	San Mateo	Econ. 12+0	San Mateo-sm
[5]Strauss, John Sidney	San Francisco	Geol. 24·142+129	305 Encina
Stray, George Rose	Campbell	M.E. 96+126	73 Sequoia
Streshly, Stuart A. B., Stanford, 1921	Azusa	Pre-Clin. 157+70	327 Encina
Strickler, Dewey Loyal	Mountain View	PS-L 142+57	262 Hope,MV-mv
Strickler, Edgar Edward	Uniontown, Pa.	LD 28–10	10 Sequoia
Strobel, Grace May	Hanford	LD 47+52	27 Alvarado
Strong, Artemas J.	Santa Paula	LD 46+24	Sigma Alpha Epsilon
[23]Strong, Edward Wm.	Gresham, Ore.	LD 33+37	55 Sequoia
[4]Strouse, Clarence A.	Pasadena	Econ. 25–20	346 Encina
Struble, Homer Pearson	Penryn	Chem. 96+177	644 Forest-p
[4]Stuhr, Raymond	Chualar	LD	310 Encina
Sturgeon, James Leonard	Monrovia	Econ. 56·86+23	221 Encina
Sturgeon, John A. H. A. B., Stanford, 1921	Monrovia	Law gr.	431 Encina
[1]Sturgeon, Robert H.	New Haven,Conn.	Law 13–2	Alpha Sigma Phi
[1]Sturges, Edward K.	San Jose	Zool. 48–38	220 Emerson
Sturm, Franz	Hoquiam, Wash.	Chem. 95+114	59 Encina
[5]Sudden, Dorothy R.	San Mateo	Hist. 45+18	Pi Beta Phi
[23]Sudden, Edwin Charles	San Francisco	LD 14+0	Zeta Psi
Sullivan, Albert A. B., Queen's College, 1920	Victoria, B. C.	Educ. gr.	30 Alvarado
[23]Sullivan, Blanch Gertrude A. B., California, 1920	Oakland	Lat. gr.	Madroño
[5]Sullivan, Cletus S.	Santa Clara	Chem.50+48	1068Madison,SC-sc
[4]Sullivan, Nellie B. A. B., California, 1917	Los Angeles	Educ. gr.	181 Roble
Sullivan, Willard Edmond	San Francisco	Chem. 130+156	19 Salvatierra
[4]Summers, David S.	Tucson, Ariz.	LD	249 Encina
[1]Supple, Frederic Edward A. B., Stanford, 1917, J. D., 1921	So. Pasadena	Law gr.	Encina
Sutherland, Hugh Sanford	Los Angeles	Engl. 74+26	Kappa Alpha
[5]Sutliff, Howard Donald	Sunnyside	Geol. 30·35+0	401 Encina
Suttle, Henry McKie A. B., Stanford, 1921	Viroqua, Wis.	Chem. 24·156+32	218 Encina
[1]Sutton, Irwin Coleman	Los Angeles	Phyl. 14+3	French Hosp., SF
[5]Sutton, Thomas Leonard	San Rafael	Phyl.-Med.179+98	Alp.TauOmega
Swabey, Clarence Stanley	Palo Alto	LD 37+8	1055 Cowper-p

Swacker, Gladys Grace Grants Pass, Ore. Econ. 136+126 163 Roble
Swanholm, Keith Henry Boise, Ida. C.E. 180+23 424 Encina
A. B., Stanford, 1921
Swanson, Oliver S. Gardnerville, Nev. LD 41+28 31 Sequoia
Swartz, Jacob Pierpont Allentown, Pa. LD 43–13 26 Sequoia
Swayne, William Wager San Francisco LD 44+37 Phi Kappa Psi
Sweeney, John Paul Phoenix, Ariz. Med. gr. 580 McAllister,SF-sf
A. B., Stanford, 1920
[5]Sweeney, Stender Joseph Los Angeles Geol. 131+94 Phi Kappa Sigma
[134]Swett, Harold David Palo Alto Econ. 10·74–1 Sigma Nu
Swett Wilber Frank Palo Alto Med. gr. 2735 Clay, SF-sf
A. B., Stanford, 1917
Swift, Charles, Jr. Sacramento M.E. 189+95 231 Encina
A. B., Stanford, 1921
[5]Swinford, Wm. Braden Stillwater, Okla. Law gr. 435 Forest-p
A. B., Harvard, 1900
Swithenbank, Grace Martha San Jose Fr. 102·111+185 86 Fox, SJ-sj
A. B., Stanford, 1921
Symonds, Henry Gardiner Hinsdale, Ill. LD 48+46 Kappa Sigma
[1]Taff, Charles Leverett Palo Alto Phyl. 10·50–27 628 Cowper-p
Taff, Katharine E. Marfa, Tex. Engl. 136+85 628 Cowper-p
[5]Tainter, Maurice L. Taber, Alta., Can. Phyl.-M.127·49+69 169Waverl'y-p
[5]Takahashi, Matsuta Montebello Med. gr. 1626 Buchanan,SF-sf
A. B., Stanford, 1919
[5]Takeyama, George Yogoro Los Angeles Med. 2129 Pine, SF-sf
[5]Talavera, Florencio Iloilo, P. I. Zool. 73·93+41 705 Cowper-p
Talbert, Paul Houston Ft. Worth, Tex. Geol. 55·57+22 Sigma Chi
[4]Talboy, D. Irene Palo Alto Pre-Med. gr. 311 Middlefield-p
A. B., Stanford, 1914
[12]Talmage, Ralph Houston Redwood City M.E. 33–4 531 Fuller, RC-rc
[3]Tamplin, Constance Almeda Palo Alto LD 24·14+9 652 Forest-p
[5]Tamplin, William Ward Palo Alto Geol. 136+87 652 Forest-p
[4]Tange, Mary Ume Japan Chem. gr. Roble
Tohoku Imperial University
[5]Tannenbaum, David Los Angeles Law 118·37+3 562 Encina
[4]Tanner, Vasco Myron St. George, U. Ent. gr. 23 Salvatierra
A. B., Utah, 1915, A. M., 1920
Tarr, Cedric Winship Sierra Madre LD 29+12 Alpha Delta Phi
[13]Tashima, Hideo R. Los Angeles M.E. 56–10 Japanese Club
Tate, Homer Franklin Palo Alto C.E. 46+46 Kappa Sigma
[4]Tattersall, Kenneth L. National City Pre-Clin. 303 Encina
Taubman, George Primrose Long Beach Law gr. Chi Psi
A. B., Occidental, 1919
Tauzer, Clarence Jaurgen Santa Rosa Law 23·141+32 13 Encina

Tavernetti, Lena Elvira	Salinas	Phyl. 137+37	384 Roble
[5]Taylor, Albert Wm.	Palo Alto	Econ. 125+8	Delta Chi
[12]Taylor, Byron Madison	Gage, Okla.	LD 30–1	118 Encina
[20]Taylor, Della LaRue	Los Angeles	Engl. 65+33	Delta Delta Delta
[5]Taylor, Dwight Warren	Los Angeles	Engl. 80+32	Alpha Tau Omega
[4]Taylor, Everett Ridley	Hollywood	LD	303 Encina
[4]Taylor, James E.	Los Angeles	Econ. ‡	Encina
[5]Taylor,Quimby Whitley	Montevallo,Mo.	Chem. 22·117+65	Delta Chi
[4]Taylor, Richard Thurston	Los Angeles	Pre-Med.	Phi Kappa Psi
Tedford, Marguerite	Los Angeles	Ed.G.A. 67·83+27	Pi Beta Phi
[5]Teeson,Walker Sam'l	ForestRiver,N.D.	Econ. 116·43–5	446 Encina
Tegner, Thelma Bodell	Santa Monica	Econ. 47·45+23	317 Roble
Tell, David Eugene	Turlock	M.E. sp. 24·114+41	431 Encina
Tempel, William Edward	Winnetka, Ill.	LD 47+46	48 Sequoia
Templeton, Bruce King	Downey	Econ. 34–43	30 Encina
[4]Templeton, Harry E.	Fort Worth,Tex.	LD	359 Encina
[4]Templeton, Newton Connor	Hood	LD	16 Encina
[14]Templeton, Robert Lyman	Downey	Law 93·75+0	Encina Gym.
[5]Templin, Ernest Hall A. B., Stanford, 1921	Rupert, Ida.	Fr. gr.	355 Encina
Templin, Neal Seymour	Rupert, Ida.	LD 34+6	63 Sequoia
[4]Tennant, Harold Winslow	Colusa	LD	222 Encina
Tennant, Robert Jones	Colusa	LD 49+32	53 Sequoia
Terman, Frederick E. A. B., Stanford, 1920	Stanford Univ.	E.E. gr.	9 Dolores
Terman, Helen Leclare	Stanford Univ.	LD 45+29	9 Dolores
Terril, Josephine A. A. B., Stanford, 1921	Stanford Univ.	Engl. 58·126+74	Kingscote
Test, Marjorie Ardis	Pasadena	LD 41–3	334 Roble
Thain, Alexander	Mayfield	C.E. 138+41	Mayfield-m
Thayer, Alfred Harwood A. B., Stanford, 1921	Upland	M.E. 45·140+67	45 Encina
[4]Thayer, William Lyman	Upland	LD	45 Encina
[4]Thede, Maurice Edwin	Madera	LD	Encina
Thomas, Arthur Blake	SaltLakeCity,Ut.	LD 45+9	Phi Kappa Sigma
Thomas, Earle Alling	Pasadena	Geol. 34·74+33	16 Encina
[12]Thomas, Gerald C. A. B., Stanford, 1921	Imperial	Law 253+14	520 Encina
Thomas,John Quincy A. B., Ohio Northern University, 1909, Ph. B., Chicago, 1920	Harrington, Wash.	Sch. Ed. gr.	628 Gilman-p
[12]Thomas, Thomas Roland	Sebastopol	LD 14+5	202 Encina
Thomas, Victor Ellsworth	Puente	Phyl. 70–21	110 Encina
Thompson, George Rowe	Modesto	LD 45–8	328 Encina

[4]Thompson,GeorgeWaggoner	Hollywood	Engl. 17–2	325 Encina
[12]Thompson, Georgia	Moro, Ore.	Hist. 151+73	Sigma Kappa
[28]Thompson,Harlan Steele	Billings,Mont.	LD 30+22	559 Cowper-p
Thompson, John H.	Palo Alto	Educ. gr.	305 Cowper-p
A. B., Stanford, 1918			
Thompson, Louis Caryll	Los Angeles	LD 46+32	61 Sequoia
Thompson, Percy Vernon	Los Angeles	Med. gr.	2103 Calif., SF-sf
A. B., Stanford, 1920			
Thomson, William Lyon	Modesto	Phyl. 12·88+56	324 Encina
[4]Thornton, Richard Scott	Los Angeles	LD	19 Encina
[5]Thornton, Walter Daniel	San Jose	Econ. 64+42	243 N. 13th, SJ-sj
Thorp, Chester Arthur	Santa Cruz	Chem. 96·42–8	358 Encina
[1]Thorup, Harold Iverson	Salinas	LD	451 Encina
[1]Thralls, Warren H.	Wellington, Kan.	Geol. 118·62+68	418 Ramona-p
A. B., Stanford, 1921			
Thrash, Jessee Emmett	Los Gatos	Econ. 181+57	Sigma Chi
A. B., Stanford, 1921			
Threlkeld, Francis Ashley	Saltillo,Miss.	Engl. gr.	215 Cowper-p
A. B., Mississippi, 1916, A. M., Stanford, 1921			
[12]Thygeson, Elling	Palo Alto	Phyl.-Med. 96·51+0	222 Kingsley
Thygeson, Phillips	Palo Alto	LD 47+44	222 Kingsley-p
[4]Tibbins, Floyd Edward	Los Angeles	Geol.	Zeta Psi
Tilden, Heber Voorman	San Francisco	Geol. 28·91–1	1367 Lex'gt'nSC-sc
[4]Tilton, Edwin B.	San Diego	Educ. ‡	601 Webster
[4]Tilton, Katharine A.	Philadelphia, Pa.	LD	601 Waverley-p
Timpany, Charles Russel	Santa Clara	Chem. 94+69	481 Lytton-p
Tindall, Verne L.	Stuttgart, Ark.	E.E. gr.	229 Encina
A. B., Stanford, 1920, Engineer, 1921			
Tingley, Mary Elizabeth	Pueblo, Colo.	Span. 59·46+63	255 Roble
[4]Tischhauser, Lillian M.	Salem, Ore.	Educ. ‡	808 Waverley-p
Tisné, Roland David	San Francisco	M.E. 60·72–6	Phi Delta Theta
Titus, Charles Hickman	Berkeley	Econ. gr.	226 Encina
A. B., Stanford, 1920, A. M., 1921			
Titus, Henry Sherley	Riverside	M.E. 45·89+48	21 Encina
Titus, Robert Chadwick	Berkeley	LD 45–1	228 Encina
[23]Tobriner, Mathew Oscar	San Francisco	LD 34+39	351 Encina
Todd, Edwin Thayer	Petaluma	M.E. 52·37+2	Sunol&Park, SJ-sj
[4]Todd, Harry Day	Palo Alto	LD	1650 Waverley-p
Todd, Ralph John Dolores	Monterey	LD 32–26	49 Sequoia
Togasaki, Kazue	San Francisco	Med. gr.	Xazmin House
A. B., Stanford, 1920			
[23]Tognazzini,RolandErwin	San Francisco	LD 29+1	Delta Tau Delta
Tompkins, Helen Arnoldette	Sunnyvale	Ed. G. A. gr.	Sigma Kappa
A. B., California, 1920			

[4]Toner, James Alexander	San Francisco	LD	Encina
Torrey, Donald Max	Fresno	LD 53+76	235 Encina
[1]Townes, William Darrel	Richmond	Econ. ‡	611 Waverley-p
[12]Townley, Mary Isabel A. B., Stanford, 1921	Stanford Univ.	Econ. 61·120+119	33 Salvatierra
Townsend, Arthur Irving A. B., Stanford, 1921	Cupertino	Law gr.	Delta Upsilon
[3]Toyoda, Hideo	Japan	LD 14+9	8 Dolores
Trace, W. Eugene	Santa Barbara	Chem. 22–21	44 Encina
[1]Trachman, Alexander M.	Santa Rosa	LD 4–10	57 Encina
[5]Tresidder, Donald B. A. B., Stanford, 1919	San Francisco	Med. gr.	1040 Union, SF-sf
Trimble, Sinclair George	San Francisco	Engl. 147+180	245 Encina
Triplett, Carl Eugene	Ceres	Econ. 80+1	27 Sequoia
[1]Triplett, Vernon William	Ben Lomond	Geol. sp. 40–8	437 Bryant-p
Trist, Marian Abigail	Palo Alto	Fr. 136+259	375 Everett-p
Tritle, Lloyd Hereford	Phoenix, Ariz.	Econ. 90+48	Delta Chi
Troxel, Elmer Ray	Chico	Pol. S. 84+116	340 Melville-p
[12]Troxell, Harold Coble A. B., Stanford, 1921	Lodi	C.E. 96·96+15	801 Stanford, M-m
Trueman, Harold Spencer A. B., Stanford, 1920	Munising, Mich.	Med. gr.	759 Middlefield-p
Trummer, David Joseph	Hayward	C.E. sp. 56+8	426 Encina
[5]Tsubakida, Takusa	Hiroshima Ken, Japan	Geol. 45·124+8	Japanese Club
[3]Tsutsumi, Hideo Waseda University	Tokio, Japan	Geol. gr.	942 Ramona-p
Tucker, John Arthur A. B., Stanford, 1921, LL. B., 1921	Palo Alto	Law gr.	Cowper Court-p
Tucker, Orville Hugh, Jr.	Prescott, Ariz.	LD 45+12	107 Encina
[12]Tucker, Robert Milton	Santa Barbara	M.E. 39–42	87 Sequoia
[13]Tull, Floyd Wm.	Palo Alto	LD 26–12	912 Cowper-p
Tully, Esther Carol	Modesto	Psych. 9·90–5	Alpha Omicron Pi
Tupman, Thomas Hilton	Oakland	M.E. 86–11	Stanford Union
[4]Tupper, Charles Ralph A. B., Stanford, 1913	San Jose	Educ. gr.	211 S. 8th, SJ-sj
Turk, John Harvey	Long Beach	Econ. 84·44+2	126 Encina
[5]Turner, Frank Seymour	San Francisco	Law 146+101	Zeta Psi
[4]Turner, Helen Tripp	Adelaida	LD	310 Roble
[234]Turner, Marion Esther	Adelaida	LD	165 Roble
[1]Turner, Warren Mortimer A. B., Stanford, 1921	Riverside	Econ. 103·77+42	Sigma Al. Epsilon
Turnmire, M. Darrel	Santa Monica	LD 35–9	138 Encina
Tussing, Ford Marlow	Sacramento	Econ. 82–75	Delta Tau Delta
[12]Tuthill, David Bogert	Saratoga	Geol. 58+81	Box 104, Saratoga-s

Tuthill, Helen	Portland, Ore.	LD 44+44	149 Roble
[12]Tutman, Baldo Joseph	Mountain View	Geol. 44–16	Mt. View-mv
Twombly, HarrietElizabeth	SanFrancisco	Med. gr.	2398 Sacto., SF-sf
A. B., Stanford, 1908			
Tyler, Arthur Robert	Pomona	C.E. 56·74–12	85 Sequoia
Uebele, Sidney S.	Pomona	Econ. 81·43–2	118 Encina
[1]Uecke, Charles Fred	Los Angeles	LD 4–11	904 Cowper
[2]Ulrich, Katherine S.	Minneapolis, Minn.	LD 15·15+12	111 Roble
Umphreys, Meta Vivian	Palo Alto	Fr. 90+40	342 High-p
[12]Uppman, Ingegerd Marie	Santa Clara	Engl. gr.	1559 Harrison, SC-sc
A. B., Stanford, 1920, A. M., 1921			
[12]Urdaneta, Maurice	Mexico City, Mex.	Chem. gr.	238 Encina
A. B., Stanford, 1921			
[4]Urner, Philip Summerfield	Mt. View	LD	231 San Antonio, MV-mv
Utahara, Frank Sadaji	Japan	M.E. 182+27	Japanese Club
A. B., Stanford, 1921			
Vail, Edwin Holloway	Palo Alto	Econ. 42·101+117	333Channing-p
[124]Valjean, Nelson	Pasadena	LD 28+13	330 Encina
Van Bebber, Alvin Wesley	Petaluma	Econ. 77+14	AlphaKappaLambda
[5]Vance, Donald William	Whitewater, Wis.	Chem. 90–30	30 Sequoia
[6]Van Clief, Harold Maxwell	Lompoc	Geol. 179–1	223 Encina
[4]Van Dellen, Elzo L.	Palo Alto	Educ. gr.	521 Everett-p
A. B., Denver University, 1904, A. M., 1906, LL. B., Northwestern, 1910			
[4]Van Dellen, Jessie	Salinas	Ed.G.A. ‡ 14+15	521 Everett-p
[4]Vanderburg, Herbert Millard	Madera	LD	123 Encina
Vanderburg, Lyall Clyman	Madera	LD 10·36+24	359 Emerson-p
[1]Vandervort, Charles Thomas	Menlo Pk.	Law gr.	W.W.Sch., MP-mp
A. B., Stanford, 1917			
Van Deusen, Theodore G.	Pendleton, Ore.	LD 46+3	35 Sequoia
Van Gorden, Evelyne L.	Alamo	Ed.G.A. 81+12	107 Roble
[3]Van Gundy, Kenneth	San Jose	LD 15+1	561 Fuller, SJ-sj
[23]Van Gundy, Ross G.	San Jose	Chem. 76·72+6	561 Fuller, SJ-sj
[12]Van Male, John Edward	Denver, Colo.	Phil. 70·28+48	359 Encina
Van Norden, Linda	Palo Alto	LD 45+66	329 Lincoln-p
Van Patten, Ellsworth I.	Pacific Beach	LD 42+25	345 Lincoln
Van Polen, Herman	Ripon	Engl. gr.	512 Lytton-p
A. B., Denver, 1916			
Van Wagenen, Gertrude	FortWorth, Tex.	Zool. gr.	El Carmelo Inn, PG-pg
A. B., Iowa, 1914, Ph. D., 1920			
Van Winkle, EdwardH.	StoneRidge, N.Y.	M.E. gr.	405 Kipling-p
B. S., Harvard, 1920			
Varian, Russell Harrison	Halcyon	Phys. 29+10	28 Alvarado
[2]Varney, Helen Elizabeth	Los Angeles	Ed. G.A. ‡ 6–8	270 Roble
Vartanian, Araxie Arpie	Turlock	Lat. 40·143+121	262 Roble
A. B., Stanford, 1921			

Vaudoit, Paul Louis	San Luis Obispo	Geol. 112·52+4	402 Encina
[5]Vaughan, Bertha	Hanford	Engl. 86+43	Kappa Alpha Theta
[24]Vaughan, Howard K.	Palo Alto	M.E.	1129 Emerson-p
Vaughan, Samuel Edson	Santa Barbara	M.E. 99+175	88 Sequoia
[24]Vaughn, Gerald Oliver	Mayfield	M.E.	Mayfield-m
Vaughn, John Orren	Los Angeles	LD 47+73	432 Encina
[5]Venator, Louis Cooksey	Los Angeles	Econ. 58+42	Zeta Psi
Venske, Harold Henry A. B., Stanford, 1921	Glendale	Econ. 180+266	520 Encina
[3]Vermilya, Harold Fay	Palo Alto	Econ. ‡ 16–1	207 Hawthorne-p
[4]Ver Veer, Emma Drake	Palo Alto	LD	465 Hawthorne-p
[1]Vesco, George	Dawson, Y. T.	M.E. 119–34	221 Encina
Vial, Robert Duncan	Portland, Ore.	M.E. 91+71	Phi Delta Theta
[12]Vietor, Lynn Albert A. B., Stanford, 1921	Eureka	M.E. 24·194+22	20 Alvarado
Virden, Ben Soulard, Jr.	Oxnard	LD ‡ 0–15	Palo Alto Hotel-p
Voerge, Maurine Grace	Cleburne, Tex.	Span. 15·102+116	228 Roble
Vogt, Carl J.	Modesto	M.E. 84–30	50 Sequoia
Vosburgh, William H.	Staten Isl., N.Y.	Psych. 80·93+71	140 Encina
[1]Vosti, Henry Angelo	San Jose	LD 12+2	22 Sequoia
Wadsworth, Harry Albert	Oakland	Engl. 83+9	Delta Chi
Waful, Edward Everett, Jr.	Chicago, Ill.	Law 90·40+4	Encina
[1]Walker, Dorothy Helen	Los Angeles	LD	377 Roble
Walker, George Hall	Palo Alto	M.E. 82+5	Theta Xi
[1]Walker, George McGowan	San Francisco	LD 5–14	Sigma Nu
Walker, George Mansfield	Palo Alto	Econ. 141+73	220 Encina
Walker, James Ernest	Palo Alto	LD 51+17	359 Emerson-p
Walker, Lee Fannin	Sebastopol	LD 38–4	233 Encina
Walker, Theodore Sammis	Westwood	M.E. 60·42+9	Chi Psi
[23]Wallace, Davis McOuat	Stanford Univ.	Geol. 10·120+83	Chi Psi
Wallace, Elizabeth	Mexico City, Mex.	Span. 91+84	851 University-p
Wallace, Hugh H.	Auburn	LD 42–6	122 Encina
Wallace, James McOuat A. B., Stanford, 1917, J. D., 1921	Mexico City, Mex.	Law gr.	Chi Psi
Wallace, Whittier W. A. B., Stanford, 1921	San Jose	Math. 187+255	857 S. 2nd, SJ-sj
[4]Waller, Carolyn Strong	Echo, Ore.	Phys.	1013 Ramona-p
[234]Walser, Ruby M.	Palo Alto	LD 31–6	840 Bryant-p
Walsh, Mona Desmond	Redwood City	Fr. 88+84	Kappa Kappa Gamma
[5]Walter, Mildred	Menlo Park	Fr. 15·107+88	Menlo Park-mp
[12]Walter, Paul A. F., Jr. A. B., Stanford, 1921	Santa Fe, N. Mex.	Engl. 182+45	Alpha Sigma Phi
Walter, Russell Lincoln	Chicago, Ill.	LD 49+36	48 Sequoia

Walther, Theodore Roosevelt	San Diego	Chem. 89+63	Sigma Nu
[4]Wandling, Harry Francis	Cedarville	LD	627 Waverley-p
Ward, Earl Colwell, Jr.	Portland, Ore.	LD 36+3	43 Encina
Ward, Frances Baldwin	Hemet	Span. 127+86	Chi Omega
Ward, Katherine Adam	South Pasadena	Lat. 92+103	339 Roble
[124]Ward, Murray Arthur	Los Angeles	Geol. 38–21	Kappa Sigma
[4]Ward, Neil H.	Fort Scott	LD	365 Encina
[23]Wardman, Emily Wringrose	Alhambra	Span. 109·29+2	263 Roble
[5]Warner, Addison Wheelock	Geneva, Ill.	Geol. 50·90+8	Chi Psi
[5]Warnock, Archibald Wilson A. B., Stanford, 1918	Palo Alto	Med. gr.	2218 Webster, SF-sf
Warren, Arthur Fulton A. B., Stanford, 1919	Washington,D.C.	Med. gr.	2631 Clay, SF-sf
[5]Warren, Walter Moore	Escondido	Engl. 113·51+50	55 Sequoia
Warren, William Morley	Datil, N. M.	LD 25–22	Sigma Chi
[23]Wasson, Virginia F.	Watsonville	Engl. 64·28+4	239 Roble
Wassum, Walter Samuel	Napa	C.E. 69–25	353 Encina
Waterman, Edward Charles	Palo Alto	M.E. 89+31	567 Lytton-p
Waterman, Joseph Carl	San Jose	LD 45+46	308 Encina
Waterman, Myra Whitney	Palo Alto	Math. 151+178	374 Kingsley-p
[1]Watson, Charles Ledlie	Palo Alto	Geol. 14–20	1400 Webster-p
Watson, Ernest William A. B., Stanford, 1921	Sunnyvale	M.E. 187+116	231 Encina
[4]Watson, Margaret Eva	Palo Alto	LD	1400 Webster-p
[2]Watson, Ruth A. B., Wellesley, 1915	Chicago, Ill.	Ed. G. A. gr.	Madroño
Watt, Geraldine E.	Klamath Falls, Ore.	LD 44+37	Pi Beta Phi
Watters, Hallie	Palo Alto	Greek 140+252	633 Channing-p
Watters, Millard Norman	Los Angeles	Pol. S. 26·97+5	244 Encina
Watterson, Jerome Wilfred	Bishop	LD 41+20	436 Encina
Watterson, Whittier C.	Bishop	LD 41+10	436 Encina
[54]Watts, Helen Stirling	Palo Alto	Sp. 87+42	502 Lowell-p
[12]Way, Herbert Frederic	Modesto	Econ. 51–17	12 Sequoia
Wayland, Charles Rucker	San Jose	Law 48·128–8	Phi Kappa Psi
[4]Wear, Margaret	Fresno	Educ. 90·15+26	118 Roble
[5]Weaver, Clarence Eugene	Halcyon	Phys. 30·50–8	College Terrace-m
[124]Weaver, Donald Kessler	LaPorte,Ind.	Geol. 62·125+71	Phi Kappa Psi
Weaver, Esther Leah A. B., Stanford, 1921	Fresno	Math. 46·134+127	108 Roble
Weaver, Fern Agatha A. B., Stanford, 1921	Berkeley	Econ. 55·126+141	312 Roble
[24]Webb, DeWitt Clinton	SaltLakeCity,U.	LD 11–4	69 Sequoia
Webster, Charles N.	PortAngeles,Wn.	LD 45+16	Cooksey Lane

Webster, Dorothy Gertrude A. B., Stanford, 1921	Paso Robles	Law 45-135+60	379 Roble
Webster, Elwyn Jerome	Riverside	Econ. 91-45+41	Beta Theta Pi
Wedekind, Richard Eldon A. B., Stanford, 1920, LL. B., 1921	Los Angeles	Law gr.	760 Waverley-p
[4]Weeks, Pearl M. A. B., Stanford, 1916, A. M., 1918	South Pasadena	Phys. gr.	567 Lincoln-p
Wegner, Walter Wm.	Sacramento	C E. 7-143+147	537 Encina
Weichselfelder, Marguerite	Palo Alto	LD 46+67	456 Ruthven-p
[23]Weil, Conrad, Jr.	San Francisco	LD 24+10	125 Encina
[4]Weil, Theodore Mitchell	Redwood City	LD	Redwood City-rc
[4]Weisel, Lloyd Henry	Galesburg, Ill.	Econ. ‡	221 Encina
Welch, Raymond Marvin, Jr.	Alta Loma	Geol. 93+63	Beta Theta Pi
[4]Welch, Sidney Hall	Coronado	LD	138 Encina
Weller, Douglas McE. A. B., Stanford, 1921	Milwaukee, Wis.	M.E. 120-68+9	Kappa Alpha
Weller, John Parsons A. B., Stanford, 1920, A. M., 1921	Lowell, Mass.	Fr. gr.	535 Encina
[4]Weller, Ruth Catherine	Redwood City	LD	Redwood City-rc
[12]Wellman, Kingsley Stone	SanFrancisco	Hist. 20–24	Sigma Chi
[1]Wells, Bruce	Portland, Ore.	C.E. 32–20	Alpha Delta Phi
[5]Wells, Clinton Fisk A. B., Stanford, 1920, A. M., 1920	San Jose	Econ. gr.	662 Vendome, SJ-sj
Wells, Earl Wilson A. B., California, 1919	Los Angeles	Med. gr.	2312 Webster, SF-st
[5]Wells, Edwin Adams A. B., Stanford, 1921	San Diego	Law gr.	Phi Delta Theta
Wells, Harrington	Stockton	Phyl. 112+3	Sigma Chi
Wells, Herbert S. A. B., Stanford, 1921	Hamakuapoko, T. H.	Phyl-Med 43-162+173	338 Encina
Wells, Loton Dutreux	San Francisco	LD 42+42	17 Encina
[5]Wells, Marjorie Ferguson	Pasadena	Engl. 21-138+176	215 Roble
Wells, Willard Bruce A. B., Stanford, 1921	Portland, Ore.	C.E. 15-165+21	Alpha Delta Phi
[4]Wells, William Bruce	San Francisco	LD	17 Encina
Welsh, Norris Lawrence	Los Angeles	Econ. 102–2	Alpha Sigma Phi
Welsh, Rex Earl	Clay Center Kan.	Chem. 135-55–26	Bx. 622, MP-mp
[4]Welty, Howard O.	Oakland	Educ. ‡	Union
Wendle, Miriam A. B., Wellesley, 1916, A. M., Stanford, 1921	Williamsport, Pa.	Educ. gr.	804 Bryant-p
[5]Wendt, Alvin William A. B., California, 1915	Pasadena	Law gr.	Sigma Alpha Epsilon
[7]Wepfer, Alfred Vincent A. B., California, 1905	Berkeley	Med. gr.	1539 Spruce, Berkeley-b

[5]Wernli, John George	Los Angeles	C.E. 10-118+71	Theta Xi
Wescott, Ruth Avery	Alhambra	Zool. 58-123+110	Sigma Kappa
A. B., Stanford, 1921			
West, Alverda	Santa Ana	Econ. 54-135+56	323 Roble
A. B., Stanford, 1921			
West, Edmund Cary	Santa Ana	Engl. 54+3	30 Encina
West, Franklin Gordon	Santa Ana	Law gr.	429 Encina
A. B., Stanford, 1921			
West, Nevada Loraine	Woodland	Hist. 4-177+147	AlphaOmicronPi
A. B., Stanford, 1921			
West, William Valentine	Ontario	M.E.45-97+117	AlphaKappaLam.
[1]West, Z. Bertrand, Jr.	Santa Ana	Law gr.	828 Guinda-p
A. B., Stanford, 1917			
[4]Westlund, Carl Robert	Oakland	LD	40 Encina
[2]Weston, Anita Weltha	Palo Alto	LD 14–4	209 Homer-p
[5]Westwick, Atwell George	Palo Alto	Law gr.	375 Kingsley-p
A. B., Stanford, 1920			
[5]Whealton, Rowland G.	Long Beach	Min. gr.	Kappa Alpha
A. B., Stanford, 1920			
[5]Wheat, Gilbert Collins	Los Angeles	LD 15+16	136 Encina
[12]Wheaton, Frederick Sherwood	SanDiego	Econ. 46–17	Phi Delta Theta
[5]Wheeler, Horace Edward	Pueblo, Colo.	Chem. gr.	542 Encina
A. B., Stanford, 1921			
[4]Wheeler, Jo Bryant	Portland, Ore.	LD	426 Florence-p
[24]Wheeler, Katharine S.	Portland, Ore.	LD 10–4	360 Roble
[12]Wheelon, Albert Gifford	SantaFe,N.M.	C.E. 68+14	Hotel Palo Alto-p
[13]Whitaker, Ruth Merritt	Stanford Univ.	Econ. 74+52	9 Alvarado
[5]White, Albert Cosad	Oakland	C.E. 10-0+0	Encina
White, Charles Benjamin	Pasadena	LD 45+25	39 Encina
[12]White, Charles Eldon	San Diego	Chem. gr.	1160 Bryant-p
A. B., Stanford, 1919, Engineer, 1921			
[5]White, Fred Ferrell	Marion, Ill.	Law gr.	235 Emerson
A. B., Stanford, 1916			
White, Horace W. Beek	Fresno	Econ. 90-48+59	350 Encina
[5]White, Margaret Emily	Palo Alto	Zool. 76+29	Roble
White, Minor	Azusa	Econ. 15-167+60	AlphaSigmaPhi
A. B., Stanford, 1921			
[12]Whiteford, William Kepler	LosAngeles	M.E. 59+6	Alpha Tau Omega
Whitmer, Wilson Ambrose	Palo Alto	Ed.G.A. 2-83+50	Kappa Alpha
Whitmire, Ethel Dorothy	San Jose	Educ. gr.	210 S. 12th, SJ-sj
A. B., Stanford, 1907, A. M., 1921			
Whitney, George Henry	Stockton	M.E. gr.	Alpha Tau Omega
A. B., Stanford, 1921			
Whitney, Helen Mason	Berkeley	LD 47+33	Alpha Phi

Whittemore, James Absalom	Monte Rio	Chem. 69+16	253 University
[5]Whittemore, John Reboul, Jr.	S. Barbara	Span. 82–4	Phi Delta Theta
[4]Whittier, Donald Williams	Beverly Hills	LD	109 Encina
[5]Whittier, Florence Oliver	Menlo Heights	Chem. 33·140+236	Kappa Al. Theta
[12]Whittier, Winifred C.	Menlo Heights	Law gr.	Menlo Heights
A. B., Stanford, 1895, J. D., 1921			
[4]Wiberg, Harry Austin	Phoenix, Ariz.	LD	207 Encina
Wickersham, Zelda Louise	Chicago, Ill.	Fr. gr.	Sigma Kappa
A. B., Stanford, 1920, A. M., 1921			
[4]Widaman, Perry Davisson	Los Angeles	LD	110 Encina
[4]Wiel, Robert Lewis	San Francisco	Hist. 75–11	106 Encina
[14]Wihler, Alfred	Salt Lake City, U.	Pre-Med.	358 Encina
Wilbur, Blake Colburn	Stanford Univ.	Phyl. 148+199	62 Sequoia
[5]Wilbur, Dwight Locke	Stanford Univ.	Phyl. 60+68	62 Sequoia
[5]Wilbur, Edna May	San Francisco	Pre-Med. 8·139+119	147 Emerson
A. B., Stanford, 1921			
[4]Wilbur, Elizabeth LaG.	Stanford Univ.	LD	Kingscote Apts.
Wilbur, Lyman Dwight	San Francisco	C.E. 189+200	310 Encina
A. B., Stanford, 1921			
[5]Wilbur, Paul Curtis	San Francisco	LD 49+49	111 Encina
Wilcox, Chester Arthur	Pasadena	M.E. 63·89+12	Chi Psi
Wilcox, Lucy Marion	Los Angeles	Hist. 81·81+50	370 Roble
[12]Wilcox, Theodore R.	Long Beach	LD 6–20	113 Encina
[12]Wilder, Floyd William	Evansville, Ind.	Econ. 29–17	30 Sequoia
Wildman, Mary Frances	Stanford Univ.	Econ. 8·139+205	37 Salvatierra
Wiles, George Webster	San Francisco	C.E. 4·73+86	403 Encina
[5]Wilhelmson, Carl	San Francisco	Engl. sp. 44+32	Box 201, PG
Wilke, John Howard	Los Angeles	C.E. 26·126–3	Beta Theta Pi
Wilkie, Charles Daniels	Los Angeles	Econ. 63–26	Delta Tau Delta
[4]Wilkonson, Myrtle	Sapulpa, Okla.	Math. gr.	180 Roble
A. B., Oklahoma, 1918			
[4]Wilkonson, Rose	Sapulpa, Okla.	Hist. ‡	178 Roble
[5]Willcox, John Frederic	Redwood City	M.E. gr.	Redwood City-rc
A. B., Stanford, 1921			
Williams, Alan Haynes	Palo Alto	M.E. 136+103	358 Addison-p
Williams, Arthur Lionel	Portland, Ore.	M.E. 193+160	424 Encina
A. B., Stanford, 1921			
Williams, Catherine E.	Hermosa Beach	Sch. Ed. gr.	Pi Beta Phi
A. B., Stanford, 1919			
[23]Williams, Eva Mae	Redlands	Hist. 52·15+11	259 Roble
[24]Williams, Frances Harriet	Lewiston, Ida.	LD 2·55+58	259 Roble
[4]Williams, Gerald Arthur	Calexico	LD	251 Encina
Williams, Helen Edith	San Diego	Econ. 51·85+48	156 Roble

[5]Williams, John Wesley, Jr. Los Angeles M.E. 73–24 Phi Gamma Delta
[4]Williams, Katheryn Jarman San Jose Educ. gr. Roble
A. B., Stanford, 1921
[1]Williams, Philip Samuel Ontario Chem. gr. 481 Lytton-p
A. B., Stanford, 1920, Engineer, 1921
[1]Williams, Richard Carvel San Francisco LD 0–14 351 Encina
Williams, Robert Tatman Quincy, Ill. Engl. 130·47+17 349 Hamilton-p
[5]Williams, Thomas Bertram San Gabriel Pre-Clin. 7·160+44 A. T. Omega
Williams, William Lloyd Oakland M.E. 46·81+31 Theta Xi
Williamson, Helen Lucile Berkeley Med. gr. 1842 Parker, Berk.-b
A. B., Stanford, 1918
Williamson, Roy Franklin Sebastopol Econ. 91+43 Delta Kappa Epsilon
[5]Williard, Henry O. Pacific Grove Law 39+0 54 Sequoia
[4]Willis, Caroline Redlands LD 237 Roble
Willis,Cornelius Grinnell Stanford Univ. Min. gr. 5 Lasuen
A. B., Stanford, 1920
Willis, Robin Stanford Univ. Geol. gr. 5 Lasuen
A. B., Stanford, 1920
Willis, Wilbur Wade San Bernardino LD 43+12 348 Encina
[12]Wills, Vesta Clyment San Luis Obispo Econ. 23·67+54 Govt.Hospital-p
Wilson, Dorothy Whedon Monrovia Engl. 91+40 Chi Omega
[5]Wilson, Ernest Archibald Hollister Law 10·109+17 416 Encina
[3]Wilson, Ernest Howard Palo Alto LD 10–7 435 Tasso-p
Wilson, Francis Eugene Stanford Univ. Econ. 20·85+55 PhiGammaDelta
Wilson, George Howard Los Angeles LD 45+48 Alpha Delta Phi
Wilson, Gerard George San Jose Chem. 131+53 419 Encina
[3]Wilson, James Hood Carmel LD 7–8 140 Encina
[5]Wilson, Leslie Edwin Helena, Mont. Law 135·51+13 120 Encina
[4]Wilson, Martel D. Stockton LD Sigma Alpha Epsilon
[5]Wilson, Ruth Eleanor Hebron, Neb. Engl. 119+66 152 Roble
[12]Wilson, Wendell Rogers Vallejo C.E. 71+34 36 Sequoia
Wimmer, Shirley D. Salt Lake City, U. Phyl.-Med.135·46+24 PhiD.Theta
Windish, Mollie New York, N.Y. Engl. 109+46 281 Roble
Wing, Robert Lewis Palo Alto C.E. 93·88+36 345 Lincoln-p
A. B., Stanford, 1921
Wingard, Glenn Adrian Long Beach M.E. 9·146+140 Theta Xi
[5]Wingood, Norma E. Santa Ana Med. gr. 302 Roble
A. B., Stanford, 1921
[12]Winklebleck, Samuel H. Modesto Econ. 75+0 Delta Tau Delta
Winn, Montgomery E. Warsaw, Ky. Pol.S.-Law18·52+11 AlphaSig.Phi
[4]Winner, Foster Ward Histon, Wis. Educ. sp. 137 Encina
Winship, Albert Offutt Phoenix, Ariz. Econ. 65–2 Delta Chi
Winsor, Lucy Burton Providence, R. I. Econ. gr. Madroño
A. B., Vassar, 1919, A. M., Stanford, 1921

[1]Wirtz, Wilber Karl	Oakland	Zool. 13–33	110 Encina
[4]Wisdom, Viola	Palo Alto	LD	169 Waverley-p
[4]Wise, Chester William	Twin Falls, Ida.	Econ.	Encina
Wisnom, Robert Freeman	San Mateo	Econ. 98+110	Chi Psi
Witherbee, Donald	Los Angeles	Phyl. sp. 81+11	Kappa Sigma
[23]Wittenberg, Howard E.	TerreHaute, Ind.	LD 31+38	311 Fulton-p
[23]Wocker, Mary Isabel	San Francisco	Chem. ‡21+0	247 Roble
Woerner, Sarah Edith	Palo Alto	Hist. 109–13	453 Hawthorne-p
[5]Wohlberg, Lester	Los Angeles	Econ. 90·47+58	49 Encina
[4]Wohlford, Burnet Coleman A. B., Stanford, 1920	Escondido	Law gr.	Delta Kappa Epsilon
[23]Wolfe, Zelda Nadine	Stockton	LD 10–10	373 Roble
Wood, Carleton Ball	Oakdale	LD 39–15	421 Encina
Wood, D. Edmund	Ogden, Utah	Econ. 75–6	Phi Kappa Psi
Wood, Edward Langstrath A. B., Stanford, 1921	Denver, Colo.	Pol. S. 135·46+67	620 Gilman-p
[4]Wood, Elsie M. A. B., Stanford, 1901	San Jose	Pol. S. gr.	998 S. 6th, SJ-sj
Wood, Granville Numan A. B., Stanford, 1920	Mayfield	Med. gr.	Mayfield-m
Wood, Margaret A. B., Stanford, 1920	Los Angeles	Engl. gr.	Pi Beta Phi
Wood, Melville Alfred	Merced	Hist. 95–14	Theta Delta Chi
Wood, Virginia A. B., Stanford, 1920	Los Angeles	Engl. gr.	Pi Beta Phi
Woodhead, Anne Elizabeth	Los Angeles	Econ. 45·47+10	Alpha Phi
Woodhead, Dorothy P.	Los Angeles	Econ. 93+87	Alpha Phi
Woodruff, Virginia May	SaltLakeCity, U.	Engl. 89+73	Gamma Phi Beta
[1]Woods, Leonard A. B., California, 1917	Berkeley	Med. gr.	2515 Sacto., SF-sf
Woodward, Ross Eardly A. B., Stanford, 1921	Spokane, Wash.	Econ. 25·159+97	Alpha Delta Phi
Woodward, Tyler Francis	Los Angeles	LD 44+7	Delta Kappa Epsilon
[1]Woollomes, James Paul A. B., Stanford, 1921	Whittier	Econ. 101·79+55	Sigma Nu
Wooster, Hiram Ferris	Vancouver, B. C.	C.E. 144+10	Phi Delta Theta
Working, Paul Drury	Wilsall, Mont.	LD 35–9	301 Encina
[12]Worth, Madalyn	Palo Alto	Ed.G.A.22·31–14	1024 Ramona-p
[4]Worthing, Jackson Baxter Ph. B., Chicago, 1911	Roswell, N.M.	Hist. gr.	Encina
[5]Worthington, Gerald Carl	San Francisco	Geol. 152+111	309 Encina
[23]Wray, Edith A. A. B., De Pauw, 1913	Shelbyville, Ind.	Engl. gr.	Madroño
[23]Wrenn, Heaton Luse	Burlingame	Law 154+87	Phi Delta Theta

[3]Wright, Andrew Curtis	Palo Alto	LD 15+4	765 Channing-p
[4]Wright, George F.	Centerville	LD	Kappa Alpha
[18]Wright, Glenna Alice	Santa Ana	Hist 52·29+9	382 Roble
[23]Wright, Harold Haven	Manila, P. I.	Geol. 59·81+39	221 Encina
[5]Wright, Hilda Maebelle	Glendora	Span. 59·110+25	179 Roble
[4]Wright, James Chalmers	Riverside	LD	Encina
[4]Wright, Jason Kingsley		LD	127 Encina
Wright, Kenneth A.	Stanford Univ.	Geol. 143+1	Zeta Psi
Wright, Milton Edgar	San Jose	Law 138+83	217 N. 1st, SJ-sj
[2]Wright, Robert Edward	Palo Alto	LD 14+9	660 Waverley-p
Wright, Robert Franklin	San Jose	M.E. 93+56	240 S. 13th,SJ-sj
Wright, Russell Berkeley	Manila, P. I.	M.E. 143+22	19 Salvatierra
[4]Wright, Samuel Vaughan	Mayfield	LD	421 Oberlin, M-m
Wright, William Edward	Stockton	LD 47+53	112 Encina
[4]Wright, William Quimby, Jr.	Sausalito	LD	244 Encina
[12]Wu, Hong	Chongchen, Honan, China	Chem. 78·102+10	Chinese Club
A. B., Stanford, 1921			
[1]Wulff, Horace Byington	Sacramento	Law gr.	Phi Kappa Sigma
A. B., Stanford, 1920, LL. B., 1921			
Wyatt, Bradley William	Long Beach	C.E. 7·81+47	Theta Xi
[28]vanWyck,Cecil J.vanA.	TheHague,Hol.	M.E. 67–5	Delta Upsilon
[5]Wyckoff, Harry Wilson	San Francisco	Econ47·125+115	Phi Delta Theta
[5]Wyman, Jennie Benson	Auckland, N. Z.	Educ. gr.	Kingscote
A. M., Stanford, 1921, A. B., M. Sc., University of New Zealand			
Yamada, So Sabro	Sendai, Japan	Med. gr.	2086 Bush, SF-sf
A. B., Stanford, 1916			
[12]Yamasaki, Seizi	Kagoshima, Japan	LD 30+12	Japanese Club
[1]Yancey, John Garth	Liberty, Mo.	Econ. 29–28	30 Sequoia
Yeung, Kwok Tsuen	Canton, China	Educ. gr.	Chinese Club
A. M., Stanford, 1921, A. B., Canton Christian College, 1920			
Yost, Russell Thorpe	Stockton	LD 48+47	112 Encina
Young, Blanche	Weaverville	Engl. 140+44	238 Roble
[234]Young, Charles Ainslee	Coronado	LD 27+12	49 Sequoia
[4]Young,Donald McKenzie	San Francisco	LD	244 Encina
Young, Dwight Dunham	Fresno	Chem. 100+22	Alpha Sigma Phi
[4]Young, Fred	Fresno	Engl. gr.	Phi Delta Theta
A. B., Swarthmore, 1913			
Young, Garth Lylle	Portland, Ore.	M. E. 135·52+27	333 Waverley
A. B., Stanford, 1921			
[5]Young, George Everett	San Francisco	Geol. sp. 64–27	Sigma Chi
[5]Young, Harold Grant	Mayfield	M. E. 55+24	331 Dartmouth, M
[4]Young, Henry Neal	Etna Mills	Educ. gr.	250 Encina
A. B., California, 1911			

[4]Young, Kimball	Eugene, Ore.	Educ. gr.	23 Salvatierra
A. B., Brigham Young, 1915, A. M., Chicago, 1918.			
[1]Young, Leo Alexander	San Francisco	Psych. sp. 9–22	Delta Tau Delta
Young, Wilmer Wheelon	Oakland	M.E. 91+18	204 Encina
Younglove, Helen	Riverside	Math. 181+122	Alpha Phi
A. B., Stanford, 1921			
Younglove, Howard Phillip	Riverside	Geol. 89+7	Beta Theta Pi
Younglove, Margaret Jean	Riverside	Hist. 49·44+22	Pi Beta Phi
[5]Yue, Nga Yau	Macao, China	Bot. 15·118+16	Chinese Club
[5]Zandmer, Myron Solis	Spokane, Wash.	Geol. 45·141+158	427 Encina
Zane, Margaret Coleman	Redwood City	Econ. 75–19	Redwood City-rc
[3]Zane, Simeon Lessard	Eureka	LD 13–3	118 Encina
Zannon, Louis Sidney	Roseville	LD 39–1	Theta Chi
Zeh, Henry Phillip	Stanford Univ.	Chem. 123+41	304 Encina
Zeitlin, Marion Albert	Los Angeles	Fr. gr.	356 Lincoln
A. B., Stanford, 1918, A. M., 1920			
[34]Ziller, Madeline Veronica	Cloverdale	LD 14–4	Roble
[4]Zoffman, Christine	San Jose	Educ. 4+7	758 Waverley-p
[4]Zschokke, Elsbeth Ethelsyn	Palo Alto	LD	526 Forest-p

SUMMARIES

OFFICERS

Trustees		15
Academic Council—rank of		
Professor	75	
Acting Professor	12	
Associate Professor	35	
Assistant Professor	28	
Total (less 3 absent on leave)		150
Other Teaching and Administrative Officers—rank of		
Emeritus Professor	9	
Clinical Professor	7	
Associate Clinical Professor	8	
Acting Associate Professor	2	
Assistant Professor	11	
Acting Assistant Professor	9	
Assistant Clinical Professor	16	
Lecturer	29	
Instructor	43	
Acting Instructor	7	
Clinical Instructor	25	
Special Investigator in Education	2	
Administrative Officer	22	
Total (less 5 absent on leave)		190
Assistants		
Instruction	46	
Administration	21	
Medical School	31	
Library	19	
Technical	28	
Total		145
Comptroller's Office		
Assistants		34
Grand total		534

STUDENTS

	Autumn	Winter	Spring	Summer	For the Year
Graduates	283	291	318	277	566
Undergraduates	2165	2090	1974	850	2813
Special Students	47	45	41	5	60
Totals	2495	2426	2333	1132	3439

By Major Subjects—For the Year

	Graduate	Undergraduate	Special	Total
Bacteriology and Exper. Pathology	2	14	.....	16
Botany	2	16	.....	18
Chemistry	45	156	4	205
Economics	19	468	21	508
Education	126	77	1	237
Graphic Art	3	30	.....	
Engineering—Civil	3	84	4	91
—Electrical	8	.....	.....	8
—Mechanical	9	200	6	215
English	48	135	2	185
Geology	7	188	6	201
Germanic Languages	3	3	.....	6
Greek	3	2	.....	5
History	26	91	1	118
Latin	4	11	.....	15
Law—Professional	78	†140	3	226
—Pre-Legal	.....	4	1	
Lower Division	.....	926	7	933
Mathematics	6	15	.....	21
Medicine	103	‡42	.....	145
Mining and Metallurgy	16	.....	.....	16
Philosophy	1	12	.....	13
Physics	6	5	1	12
Physiology and Histology	4	58	.....	62
Political Science	7	31	.....	38
Pre-Clinical	.....	22	.....	22
Pre-Medical	8	22	.....	30
Pre-Nursing	.....	3	.....	3
Psychology	1	17	1	19
Romanic Languages—French	15	46	1	99
—Spanish	9	28	.....	
Zoology—	1	30	.....	31
—Entomology	3	10	1	14

† Also registered as Economics Majors, 22; as History Majors, 5; as Political Science Majors, 5.

‡ Also registered as Physiology Majors, 15; as Chemistry Majors, 1; as Bacteriology Majors, 1; as Zoology Majors, 2; as Pre-Clinical Majors, 22.

By Residence—For the Year

California	2488	New Mexico	13	Delaware	1
Oregon	115	Hawaii	11	Florida	1
Washington	89	Ohio	10	North Carolina	1
Idaho	59	Wyoming	9	South Dakota	1
Arizona	52	North Dakota	8	Vermont	1
Illinois	50	Michigan	7	West Virginia	1
Colorado	42	Massachusetts	6	Canada	24
Utah	40	Washington, D. C.	5	Japan	20
Texas	39	Connecticut	4	China	14
Indiana	31	Mississippi	4	India	6
Montana	27	New Jersey	4	Mexico	6
Missouri	22	Tennessee	4	England	5
New York	22	Alabama	3	South America	5
Philippine Islands	21	Alaska	3	Belgium	3
Iowa	19	Kentucky	3	Central America	2
Pennsylvania	19	Arkansas	2	Holland	2
Kansas	18	Georgia	2	Russia	2
Minnesota	18	Louisiana	2	East Indies	1
Nevada	17	New Hampshire	2	New Zealand	1
Nebraska	16	Rhode Island	2		
Oklahoma	16	South Carolina	2	Total	3439
Wisconsin	14	Virginia	2		

ALUMNI ASSOCIATION

[Organized June 15, 1892]

CONSTITUTION

(As amended, 1908–21)

IN order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater,* we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

I. MEMBERSHIP

1. All persons who have received a degree from the Stanford University are members of this Association.

2. All former students of Stanford University are associate members of this Association and shall have all rights and privileges of memberhip.

3. All members of the Faculty are honorary members of this Association.

II. OFFICERS

1. The officers of this Association shall be: (1) a President; (2) a Vice-President; (3) a Secretary-Treasurer; (4) an Executive Committee consisting of the Secretary-Treasurer and four other elected members, one of whom shall be designated as Chairman; and (5) an Advisory Board, consisting of the President, the Secretary-Treasurer, one representative elected by the graduating class for the term of one year, and nine elected members who shall be graduates of five years' standing, and who shall be elected for three-year terms. . . . The Advisory Board shall elect its President and Secretary.

2. All other officers shall serve for one year or until their successors are elected.

III. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all business meetings of the Association, to deliver the President's address on Alumni Day, and to perform such other duties as usually belong to his office.

2. It shall be the duty of the Vice-President to preside in the absence of the President and to perform the other duties belonging to his office.

3. It shall be the duty of the Secretary-Treasurer to keep accurate

minutes of the meetings of the Association and to act as Secretary of the Executive Committee, of which he shall be a member.

4. It shall also be the duty of the Secretary-Treasurer to have charge of the collection and disbursement of the funds of the Association.

5. The Secretary-Treasurer shall be allowed ten per cent of all dues or assessments collected, as compensation for his services.

6. It shall be the duty of the Executive Committee to arrange for the programme to be presented on Alumni Day; or any programme for other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon it; and to attend to all business of the Association not otherwise provided for.

7. It shall be the duty of the Advisory Board, when deemed advisable, to consult alumni, undergraduates, faculty, and trustees, and to make recommendations regarding the welfare of the University and of the Alumni Association.

IV. COMMITTEES

1. The President shall be ex-officio a member of all committees.

2. At each annual business meeting the President shall appoint a committee of two persons to audit the Treasurer's accounts.

3. A Regional Director of the Alumni Association shall be appointed annually in communities which the Advisory Board of the Alumni Association shall designate. The purpose of the district organization shall be to develop local interest in respect to the undertakings of the University and the policies of the Association. The Regional Director shall be selected and shall hold office in the manner prescribed from time to time by the Advisory Board of the Alumni Association. The duties, privileges, and jurisdiction of the Regional Director shall be defined from time to time by the Advisory Board of the Alumni Association.

V. ELECTIONS

1. The February issue of the *Stanford Illustrated Review* shall give notice of the annual nomination and election of officers of this Association. Said notice shall contain the names of the incumbent officers and shall indicate the hold-over members of the Advisory Board, and shall contain in full the provisions of this Constitution relating to nominations and elections.

2. Nominations in writing, signed by at least twenty members, shall be required for any nomination. Nominations shall be forwarded to the Secretary-Treasurer between the first day of February and the first day of April of each year. On or before the fifteenth day of April of each year, the Secretary-Treasurer shall mail to every member

of this Association whose dues for the current year have been paid, an official ballot containing all the nominations, with the addresses of the nominees and the number of proposers of each, and said ballot shall be published in the April issue of the *Stanford Illustrated Review,* provided, however, that where no contests occur, the Secretary-Treasurer shall be empowered to cast the ballot.

3. Officers shall be elected at an annual election to be held at Stanford University on Alumni Day, between the hours of nine o'clock a. m. and twelve o'clock noon. The Executive Committee shall have charge of the election. The elector may cast a written ballot in person, or by mail addressed to the Secretary-Treasurer, marked "Ballot" and disclosing the sender's name, and enclosing a ballot in a plain envelope. Ballots so received shall be opened and cast only during the hours of election. The respective candidates receiving the highest number of votes shall be declared elected. A tie vote shall be decided by lot.

4. No one whose annual dues are in arrears for the current year shall be entitled to vote or to hold office.

VI. DUES

The dues of the Association shall be $1.25 per year for each member thereof, which amount shall include a subscription to the *Stanford Illustrated Review.*

Provided, however, that all members who, prior to May, 1908, have paid $5 shall be exempted from further dues.

VII. MEETINGS

Meetings of the Association may be called by the President or by petition of twenty members, said meetings to be held at Stanford University.

VIII. AMENDMENTS

Any proposition to alter or amend these Articles of Association must be proposed in writing, signed by twenty members, and submitted to the members by mail in printed form by the Secretary-Treasurer, and voted upon in the same manner as are nominations for officers, and adopted by a majority vote.

OFFICERS OF THE ASSOCIATION, 1920–21

President—GEORGE JOSEPH PRESLEY, '07.

Vice-President—MILDRED HAYES ROTH, '11.

Secretary-Treasurer—JOHN EZRA MCDOWELL, '00.

Executive Committee—EUGENE FRANCIS KERN, '19, Chairman; ELMER RUEL AMES, '17; JOHN EZRA MCDOWELL, '00; EDWARD DANA NOLAN, '17; GEORGE JOSEPH PRESLEY, '07; HAROLD DAVIS WEBER, '17.

Advisory Board—GEORGE ARMAND DITZ, '11, Chairman.

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